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BRITISH MEDICAL JOURNAL

JOURNAL OF THE BRITISH MEDICAL ASSOCIATION

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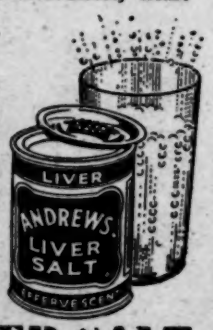

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BRITISH MEDICAL JOURNAL

LONDON SATURDAY OCTOBER 30 1943

TRANSPLANTATION OF THE URETERS INTO THE LARGE BOWEL*

BY

G. GREY TURNER, LL.D., M.S., F.R.C.S.

Professor of Surgery, University of London; Director of the Surgical Unit, British Postgraduate Medical School

This subject has always interested me, for at the outset of my surgical career I saw cases of ectopia which made me realize the utter misery of the sufferers, so often to become unwanted outcasts who, like Job, survived to "curse the day wherein they were born." Treatment was most unsatisfactory, and though transplantation of the ureters into the bowel seemed the best solution I was brought up in the belief that the operation was extremely dangerous and sure to be followed by ascending renal infection and rapid death; the only justification for a return to the subject is because some members of the profession still appear to be obsessed by this fear.

For me the bright lamp of surgical progress in this field was lighted in 1911 when Stiles of Edinburgh read a paper in Denver City on two cases in which he had successfully transplanted the ureters by burying them obliquely in the wall of the bowel, in much the same way that the catheter is buried in the stomach wall in the Witzel method of gastrostomy.

After-results

In 1927 I delivered a Hunterian Lecture on this subject, and was able to give the after-history of 17 personal cases from a few months to 15 years after transplantation (Turner, 1929). The subsequent history of these same patients after the lapse of a further 16 years is now presented (see Table). The numbers of the cases recorded in the original paper are placed in the fourth column. The patients have been very closely watched, and those who have been admitted to hospital for various reasons have been submitted to detailed examination. In no case has there been gross evidence of renal deterioration. In 1936 J. H. Saint examined several of these patients by the method of intravenous pyelography, and the results were published in a joint paper (Turner and Saint, 1936). In the original 17 cases there were four deaths directly due to the operation (peritonitis 3, septic dermatitis 1). Three patients subsequently died—from intestinal obstruction, sepsis following a plastic operation after removal of the ectopic bladder, and haemorrhage after plastic repair of the penis respectively. Thus none of the patients who recovered have subsequently died because their ureters were transplanted. Of the 9 surviving cases the essential details are set out in the accompanying table.

After-history of 9 Cases of Transplantation for Congenital Defects with Incontinence. All Previously Reported (Turner, 1929)

Case No.	Sex	Age at Operation (years)	No. in *B.J.S.*, Vol. 17	Time since Operation (years)	Present Condition	Further Particulars
1	Male	8	1	30	In good health	Working long hours at munitions
2	Female	22	2	29	,,	Three children born since operation. Does all own household duties. Twice had stone removed from right kidney and ureter
3	Male	19	3	25	,,	Has worked as a farm labourer. Married
4	Female	6	5	25	,,	Stone removed from kidney. Married; no children
5	Male	5	7	23	,,	During one recent year several attacks of renal pain. Married
6	Male	10	12	19	,,	Trouble with inguinal hernia. Otherwise well. Does heavy work
7	Male	8½	15	17	,,	Nephrectomy for pyonephrosis—persistent urinary fistula. Does heavy work down a mine
8	Male	3	16	16	,,	
9	Female	3½	17	16	,,	Has always been splendidly well

In Case 7 an enormously dilated ureter could not be buried and was simply tucked into the bowel end to the side. In Case 9 a submucous bed was prepared. In the other cases the original method of Stiles was used, one ureter being implanted at a time and with a varying interval between interventions. Full details of the operations are given in the original paper. "In good health" means that the patients can stand up to their environment and take their place among their fellows. No. 1 has never been a big strong person, but he has developed quite well, played games, including football, and has always been ready for work when it was available. No. 2 is a brave woman now 51 years of age. Her first child was born three years after the operation, and both pregnancy and delivery were without unusual incident. Ever since the operation she has had some pain in the back, but it has only been very troublesome at infrequent intervals during the last five years. In 1938 a phosphatic calculus was removed from the right kidney, which was considerably dilated, and early this year a large calculus was removed from the corresponding ureter. The patient is now very well. Except for these attacks her health has been good, and her greatest happiness has been to look after her family and household. She has carried out all the domestic duties which fall to the lot of a North Country woman of the artisan class. After her day's work she has often visited the pictures and has gone from home on holiday each year. For years No. 3 did the hard work of a general farm labourer. His marriage about three years ago was for companionship, but is not entirely Platonic. Case 4 has also had a stone removed from the right kidney 14 years after the transplantation; but she has always been well and active, carrying on the work of a ladies' hairdresser, which in her case entailed a considerable amount of travelling. Three years ago she married, and is anxiously awaiting maternity. No. 5 was a feeble child but has developed into a sturdy young fellow. Four years ago he was exceptionally well, was working long hours, and dancing in the evenings by way of relaxation. During the past twelve months he has had several attacks of renal pain; but these symptoms left him after passage of a considerable amount of grit, and he is now working regularly in charge of a factory. No. 6 has enjoyed good health except for troubles due to double inguinal herniae, one of which had to be operated upon in a state of strangulation; but despite this handicap he puts in a long day as a craneman. No. 7 has had a tedious time with many vicissitudes, including nephrectomy for pyonephrosis. None the less he is well developed, strong and active, and capable of hard work. No. 8 has been difficult to keep in touch with, but he is reported to be well and strong. No. 9 was operated upon at an early age, but she made an easy recovery, has developed normally, has never shown any untoward symptoms, and has grown into an attractive girl who enjoys excellent health. Many other cases operated upon since the above series have been equally satisfactory, and I would just recall a charming girlie born with an ectopic bladder whose parents were thrown into the depths of despair as the result of the utterly pessimistic outlook of the

* Presidential address delivered at the Medical Society of London, Oct. 18, 1943, much abridged.

consulting surgeon who was called to see the case a few days after birth. The transplantations were carried out between 3 and 4, and now, eight years later, the child is perfectly well, highly intelligent, and especially fond of swimming. Also another girl, who wrote four years after operation: "I have to catch a bus in the mornings at a quarter to eight in the black-out, but it is fun!" An officer whose ureters were transplanted just previous to total cystectomy for neoplasm is now, two years later, back to his military duties, albeit on the home front, while in like case a street trader is actively employed in his traffic. I used to feel that every case of transplantation would sooner or later show some evidence of ascending infection, but I am now hopeful that with the great simplification of the technique there may be many in which it never occurs. The exact condition of these patients may be regarded as the results of an experiment in applied physiology, and can be detailed as follows.

Details of Results

Effect on the Economy of the Body.—Just after the transplantation the patients are invariably abnormally thirsty, and this may continue for about a year. During this period they often lose weight, and sometimes very considerably. After this time thirst diminishes and they not only regain lost weight but begin to put on flesh, so that they come to look plump and well nourished. Appetite is usually good and mental acuity more than average. They behave like normal individuals, are cheerful and happy, and able to work and play like others of their station. They can also stand up to the buffets of their environment, including physiological processes like pregnancy, operations, and illness.

Rectal Function and Control.—In nearly all my cases this has been satisfactory, though in two of them continence during the night has never been acquired, though these same patients have complete control by day. While there is some variation, most patients can hold the contents of the rectum for three to four hours at a stretch, and the call is not so urgent but what they can await a convenient opportunity with confidence. Some patients sleep throughout the night without being disturbed, while others may rise once or twice. All agree that the behaviour of the rectum is much influenced by the general health. With exhaustion or indisposition rectal calls are more frequent. The contents voided are usually an intimate mixture of faeces and urine, but sometimes the same patient may pass clear or opalescent urine at one time and a solid evacuation at another. The rectal mucous membrane is unaffected and, except for unusual moisture, looks normal when inspected through the sigmoidoscope.

Where the Urine is Stored.—At the time of my first communication many considerations led me to conclude that the urine was stored in the large bowel and not in the rectum. This conclusion is amply supported by urography.

Effect on the Kidneys and Ureters.—The changes in structure are sometimes very striking. In the first few weeks the ureters and pelves may be dilated, and this dilatation may persist and increase. In the series of examinations made in collaboration with J. H. Saint four out of six patients showed a moderate degree of unilateral hydronephrosis, and in another the condition was bilateral. The most striking feature was the general good health of the patients examined. Marked unilateral hydronephrosis was also found in a patient who died subsequent to operation for intestinal obstruction, but that boy had enjoyed good health until his fatal illness. In nearly all of the earlier cases there was clinical evidence of some ascending renal infection, but for the most part it was transient and did not materially interfere with recovery. From the clinical aspect only those cases in which there has been obstruction in the lower ureter have suffered seriously. This is in keeping with general pathology, and conforms to the rule that infection with good drainage is often neither very troublesome nor dangerous. The ureter may be dilated or may look normal, but the actual junction with the bowel and the opening into the lumen is not always demonstrable either by radiographs or by sigmoidoscopic examination. When visible it may take the form of a nipple with a terminal or lateral orifice, a rosette, or a tiny opening hidden behind one of the rectal folds.

Should Both Ureters be Transplanted at the Same Sitting?

Up till quite recently I have always taken the view that it is safer to transplant one ureter at a time, and the wisdom of this course has been borne out by statistics. With better understanding of the problems involved, a simpler technique, and more knowledge of after-care, I am tending more and more to carry out a simultaneous transplantation, except in children, and even in them the hazards of a second anaesthetic may perhaps balance the only slight extra risk of the double transplantation.

What is the Best Technique?

The technique has now been very much simplified, and is carried out without any special apparatus. Clamps are not used either for the ureter or for the colon. Coffey's tubes are no longer employed, and Charles Mayo's catgut guide has been discarded. The main points are to make an oblique implantation into a submucous bed in the bowel without kinking or compression and with due regard for the blood supply of the ureter. Compression from too tight suturing or the result of haematoma or traumatic oedema is probably the most harmful thing that can occur. Fine 3/0 or 6/0 chromic catgut is used throughout. Drainage is not employed.

Preparation and Operation

Preparation will differ a little, depending on whether the surgeon is dealing with a congenital defect in an otherwise healthy child or the operation is for the relief of some condition, such as malignant disease of the bladder, likely to be associated with sepsis or general deterioration. No operation should be done until the renal function has been raised to as nearly the normal standard as possible. The bowel should be well cleared by a reliable purgative or by an enema not later than 12 hours before operation. If there is distension or constipation a full dose of castor oil is the best preparation. No attempt should be made to sterilize the bowel or even to cleanse it by repeated irrigation, which may result in the surgeon's encountering a wet puddle in the pelvic colon. The choice of anaesthetic will depend partly on the condition of the patient and partly on the practice of the surgeon, but whatever method is employed complete relaxation is necessary. The patient is placed in the Trendelenburg position and the abdomen opened by one of the vertical incisions, which must be long enough to give ready access to the pelvis. I have made it a practice to transplant the right ureter first, but I am not able to give any valid reason for the choice. If both are to be transplanted at the same sitting I am sure that it should be into the same side of the bowel, and the right or inner side is the more convenient. To bring this about it is usually best to pick up the left ureter on the outer side of the sigmoid and to bring it through the mesocolon to the inner side, where it is made to enter the bowel about 1½ in. higher than its fellow. It is usually easy to identify the ureter as it crosses the pelvic brim. Spontaneous vermiculation, or this movement elicited by mechanical stimulation, is characteristic. The posterior peritoneum is incised in the length of the ureter for about 3 in., and the ureter is gently lifted from its bed and traced towards the bladder. Not more than 2½ to 3 in. should be isolated: in this respect illustrations in surgical journals are misleading. At the lower end the ureter is clamped and divided obliquely; the end is securely tied, and its open end carbolized and allowed to retract. The upper end is held by a suture passed from its lumen and out through its upper surface a quarter of an inch from the cut end. This is tied, and is subsequently used for drawing the ureter into the lumen of the bowel and for fixing it to the bowel wall. The ureter is now turned backwards over a pad of gauze; this kinking is enough to prevent the escape of urine. A few interrupted sutures draw together the edges of the incision in the posterior parietal peritoneum.

The position of the incision to be made in the bowel is now determined by finding out where the ureter lies most comfortably against it without kinking. The aim is to carry the ureter obliquely into the bowel in the same alignment as it occupies in its retroperitoneal bed. The site for the right ureter will probably be in the lowest part of the sigmoid or the uppermost end of the first part of the rectum. The actual incision in the bowel will usually be 1½ or 2 in. long, and this is marked out by guide sutures. The incision is made obliquely through the muscular wall down to the submucous layer. The edges will retract, but this process may require to be helped by gently spreading with dissecting forceps or a few touches of the knife, used with the blade on the flat. At the lower end of this oblique bed a small hole is made into the bowel lumen. The idea is to make such an aperture as will comfortably admit the ureter, but in practice it usually works out a good deal larger. Both ends of the stitch on the ureter are now threaded on a small round needle, which is passed through the hole into the bowel and out through the whole

thickness of its wall half an inch beyond the aperture. The ureter may have to be manipulated through the latter. Both are pulled upon to draw the ureter to this site and well up against the inner surface of the bowel. The ends are then tied firmly, but not so tightly as to cut through the tissues. The edges of the incision in the muscular layer are now sewn over the ureter with four or five interrupted stitches. If there has been any doubt about the fixation of the ureter the first muscular stitch takes a bite of its wall. The peritoneum is then drawn together over the first sutures, taking great care to bury the ureter-fixation stitch properly. One or two more than the number of deep stitches will be required. It is particularly important that the stitch nearest to where the ureter enters the bowel should be lax, as it is at this point that obstruction may be caused by subsequent oedema or kinking. If after tying this last stitch the ureter is seen to fill up, the suture is causing obstruction and must be removed. If excretion is going on, the urine should be escaping into the bowel while the anastomosis is being made, and the ureter should never distend. The ends of this last stitch are left long, and are used to anchor the bowel to the cut edge of the posterior parietal peritoneum. In this way at the conclusion of the operation the ureter passes directly from its retroperitoneal bed into the bowel, so that it has no intraperitoneal course. If the second ureter is to be transplanted at once the same steps are taken, but the incision in the bowel wall should be an inch or an inch and a half higher up than the first implantation. After completing the toilet of the peritoneum the omentum should be crowded into the pelvis and the patient brought to the horizontal position for closure of the abdomen. For some three years now I have omitted drainage from the site, but it is a perfectly rational safeguard, and the surgeon need not hesitate to use it. The abdominal wall must be very carefully closed, some through-and-through sutures being used. As a last step a tube about forefinger size is passed into the ampulla of the rectum and fixed to the anal margin by suture. This is to prevent the accumulation of a puddle in the rectum which might encourage infection.

The whole procedure takes from three-quarters of an hour to an hour and a quarter, depending upon whether or not both ureters are transplanted.

Immediate After-progress and Treatment

There should be no shock and very little upset of any sort. Urine may be discharged into the rectum from the outset, but it is more usual for uresis to be delayed for about six hours. At all events, only if there is no evidence of secretion by the end of that time should active steps be taken to encourage it. Some patients vomit a good deal and a moderate amount of distension is not uncommon. Such symptoms nearly always clear up as soon as uresis is freely established. I have always avoided the use of enemata, fearing to disturb the site of anastomosis. The patient reaches the ward with a glucose-saline drip *in situ*, and this is continued until there is a free discharge of urine from the rectal tube. When the patient recovers from the anaesthetic, the drinking of hot water is allowed and, in the absence of vomiting or distension, encouraged. It is only in cases with rather poor renal output or in which uresis is delayed that the intravenous sodium sulphate 4.3% is employed.* The rectal tube should be removed in four days, or earlier if it is much resented. Thereafter there may be incontinence for some days, especially in children, and adults may have very frequent calls—perhaps every hour. But even children acquire rectal control quite quickly, and nearly always by the time they are ready to leave hospital—in three or four weeks. Of course some education is usually necessary, and to this end it may be a help to keep the bed-pan in the bed. A capable and understanding nurse will usually manage to assist even small children to acquire control within this time.

Complications

In the early stage anuria, chest troubles, and peritonitis are the only likely troubles. At the end of about a week distension, local tenderness in either iliac fossa, quickening pulse, elevated temperature, and general malaise are very suggestive of intra- or extra-peritoneal infections about the site of anastomosis. Such a condition is grave but not necessarily fatal. In two cases (Nos. 4 and 5) a localized abscess formed and after evacuation was followed by urinary fistula, yet spontaneous recovery ultimately ensued, and both patients are now, many years afterwards, alive and well. Some infection of the kidney used to be so frequent as to be looked upon as part of the normal convalescence, but in more recent years it has seldom occurred, possibly owing to the simplification of the technique. Most cases turn out to be mild, but, even so, the onset may be rather alarming and attended with considerable general disturbance. As a rule this soon settles down, leaving a swollen tender kidney with some fever as the only indication. In the more serious types things go from bad to worse until the patient presents the picture of acute ascending pyelonephritis, but I have not seen death from this cause for some years. In his anxiety and apprehension about possible renal infections the surgeon must not forget that these patients are liable to the occasional complications attending on laparotomy for any purpose. I have successfully dealt with a case (No. 3) in which a loop of small intestine escaped through the wound and became strangulated, and the burst wound is not unknown.

Mortality

The mortality rate depends to a considerable extent on the condition demanding the operation. In the non-malignant cases and especially the congenital deformities it should be very low—perhaps 5%—but in the malignant cases such a low rate is not to be expected if the possible advantages of the operation are to be offered to the greatest number of sufferers. In children some deaths have been due to chest complications and to the exanthemata, and I would stress the wisdom of choosing the summer months for the ordeal and of keeping children in hospital for a fortnight before operation.

When to Transplant the Second Ureter

There is no stated time for dealing with the second ureter, and the interval must depend on the progress made after the first intervention. If all goes perfectly well, three weeks has proved a proper interval; should it be otherwise, the surgeon must bide his time. The only error is to re-operate too soon.

Some Late Sequelae

If pyelitis is going to develop it usually comes on within a fortnight of the transplantation, but once having developed it tends to recur at varying intervals, perhaps over a lifetime. Hydronephrosis, on the other hand, probably develops over the course of months, and may not give rise to symptoms unless it becomes infected. Quite often it is discovered only because looked for. Calculus formation is not very rare, for it occurred three times among my first 13 patients who lived long enough to develop the condition. The symptoms became suggestive 15 years, 22 years, and 25 years after the original operation. Frequency of rectal micturition has seldom been a constant feature, but it may be an accompaniment of general ill-health. Rectal incontinence for urine is in my experience the most disturbing sequel. Fortunately it is unusual. In spite of painstaking investigation I have been unable to discover the cause, nor have I been successful in treatment. Wearing a rectal tube at night—a large catheter of the de Pezzer type—is a useful palliative measure.

Special Groups of Cases

Congenital Anomalies.—Of these the commonest is ectopia vesicae, which is said to occur once in every 50,000 births. The next are the lesser degrees of the same condition, such as complete epispadias in the male and the corresponding anomaly in the female known as subsymphysial epispadias. *The age at which to operate* is an important problem. I consider that the optimum time will occur somewhere between 4 and 6. But it is not so much a question of the number of years but of the condition, and whatever the age the operation must not be carried out until the child is in established good health. Many a child at 4 is better fitted for the operation than others at 6. But it is never too late to consider operation if congenital deformity is the indication, and my friend Mr. Norman Hodgson dealt most successfully with a case of ectopia in a man of 51 who, by a strange irony, had consulted me 30 years previously, only to be told that no operation was feasible. As a rule children do better than adults, and it is surprising how readily they accommodate themselves to the altered physiological condition.

* 42.85 g. of hydrated sodium sulphate (Glauber's salt) dissolved in one litre of distilled water gives an isotonic solution of 4.3%.

The exposed mucous membrane of the ectopic bladder is a distinct danger, and many examples of the development of epithelioma have been recorded. Quite apart from this risk it is offensive to the eye, may give rise to an unpleasant discharge, and is liable to mild injury and excoriation. In either sex some sort of plastic repair of the affected area is desirable.

With the lesser anomalies the question of marriage is often raised, and even in complete ectopia patients of either sex have sought the consolation of matrimony. The female with a normal partner may prove fruitful, and there is no reason why such marriages should not be happy. There appears to be no special risk in pregnancy, and, since the pubes is constantly separated, labour is often easy (Case 2). In the male sexual gratification is said to occur, but neither of my married male patients has as yet become a father. Now that the transplantation is less likely to be attended by sequelae, I welcome the opportunity of carrying out more careful and complete restoration of the genitalia.

Separation of the Pubic Bones.—In the case of complete ectopia the pubic symphysis is separated to the extent of from four to six inches, but the bones are connected by a very strong ligament. It is often assumed that such a degree of separation will result in marked disability, but though the thighs are more or less widely separated and the patient walks with a characteristic gait, they are usually quite strong and able to carry out ordinary activities without impediment.

Other Pre-operative Problems that may Arise.—Sometimes there is weakness of the anus with incontinence, and on occasions prolapse. If this is associated with some degree of spina bifida and perhaps weakness of the lower limbs no improvement can be expected, and transplantation into the usual site is contra-indicated. Confronted with these circumstances Hey Groves made the transplantation into the caecum, and combined this with a left inguinal colotomy. As a result not too frequent pultaceous stools could be easily controlled by a colotomy belt, and for some years the patient was able to lead a sheltered but useful life.

Contraindications to Transplantation.—Marked pyelitis and pyonephrosis are usually regarded as contraindications to transplantation. It is always worth while establishing external loin drainage by nephrostomy and, if sufficient improvement follows, to proceed to transplantation while the drainage is still operating.

The Widening Scope for Transplantation

For many cases of *malignant disease of the bladder* total cystectomy holds out the best prospect of long palliation or even cure. In this operation it is necessary to divert the urine, and by far the best plan is to carry the ureters into the bowel. The technique is the same as that used in other cases. When the transplantation is a proved success—and this is usually assured in three or four weeks—the removal of the bladder may be carried out.

In some cases of *malignant disease of the cervix* extension to the adjoining bladder renders treatment both by radium and by hysterectomy impracticable. In such cases total hysterectomy, together with simultaneous removal of the bladder, holds out some prospect, and in the absence of glandular involvement or distant dissemination should be practised. The transplantation of the ureters should be a first stage, and the next part of the operation should not be undertaken until the patient has become stabilized under the new physiological conditions. An interval of 6 to 8 weeks will probably suffice, but there should be no unwarranted haste.

For some years now the operation has been used for certain intractable cases of *vesico-vaginal fistula.* In such cases transplantation should not be combined with a last desperate attempt at local repair, but should be a deliberate intervention only to be carried out after proper preparation. In the *systolic bladder,* which is sometimes a problem after the successful removal of a tuberculous kidney, diversion of the ureter into the bowel may bring great relief.

Transplantation has also been used in certain cases of severe *injury to the urethra* usually associated with fractured pelvis. Though this indication is among the rarest, it should be kept in mind.

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OCULAR MANIFESTATIONS OF NEUROSES COMMONLY FOUND AMONG SOLDIERS

BY

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Fear and environmental stress are very prevalent in wartime and often give rise to chronic anxiety. Many soldiers react to such a chronic anxiety by developing a neurosis, of which there are two main varieties—hysteria and the chronic anxiety state. Whether one or the other will develop depends on the individual personality type.

The hysteric has an essentially childish personality with an undeveloped or perhaps only unsustained sense of social responsibility. He reacts to the anxiety by dissociation, which may affect nerve, muscle, bone, joint, an entire limb, memory, the conscious state, etc. He is very open to suggestion, and the type of somatic localization may be suggested by his observation of the infirmities of others or his memory of past disabilities within himself. In this way undue prominence is given to a condition already present, or else one is created entirely *ab initio.* The somatic incapacity is such as to still the anxiety or the conflict that may have arisen between it and duty. The more successfully this is done the happier is the patient, who may indeed wear a fixed look of quiet satisfaction throughout the day.

The patient who develops a chronic anxiety state is usually a more mature personality with some awareness of his obligation to society. His reaction to the anxiety provoked by fear or environmental stress is different from that of the hysteric. The early somatic upset appears to take place in the endocrinal and autonomic systems, leading to disturbances of the vasomotor, respiratory, sudomotor, or gastro-intestinal system. In this way are produced palpitations, vascular throbbing, headache, syncope, flushes, paraesthesia, breathlessness, sighing, undue sweatings, vomiting, diarrhoea, and dry mouth. The somatic incapacity is frequently not sufficient to assuage the anxiety of the patient, who may present a worried, unconfident attitude to the outside world.

As a result of hysteria and chronic anxiety state, various conditions arise in and around the eye. Indeed, it may be said without exaggeration that half of the soldiers presenting themselves at the out-patients' room of the eye department of this hospital in the Middle East have complaints which may fairly be described as functional. The most frequent, and those that will be dealt with in this report, are defective day vision, defective night vision, asthenopia, diplopia, headaches, photophobia, spots before eyes, and epiphora. All of these symptoms are found in organic conditions. Investigations into each of them should therefore take three main directions: (1) exclusion of organic disease, or, if present, an assessment of its role in the production of the symptoms (organ–symptom parallelism); (2) a detailed investigation into the nature of the symptoms; (3) some investigation into the patient's personality (while in difficult cases this is the sphere of the whole-time psychiatrist, the ophthalmologist should be capable of the simpler approaches). As investigation No. 3 applies to all the symptoms similarly, a brief generalization will be made now of the main points of inquiry.

Inquiry should be made into the presence of any worries, dislikes, or fears, and the degree of duty sense as evidenced by his former reactions to life. Search should be made for anything in the personal or family experiences of the patient, or in his general environment, that might have suggested the symptom to him. This may be a weakness of one eye which the patient had many years ago, or a history of blindness in his family, or the defective night vision of which his friend in the unit has complained. The relation of the symptom to change of environment should be noted, especially when a new climate provides factors, such as heat and glare, which can be blamed for it. It is noticeable how often among the troops in the Middle East a visual complaint began on the voyage out between Freetown and Capetown. It is as if there were an incubation period for the symptom.

The reaction of the patient during the examination should be carefully noted. Is he "too accepting" of the symptom, or is he disgruntled or even aggressive? Are his responses variable, and is he open to suggestion? Is there hesitancy of speech, or is there a stutter? Note if his attention wanders during the course of the examination.

After such inquiry a general idea of the personality pattern of the patient should be known.

Defective Day Vision

Defective vision is a common functional symptom. It may vary from complete blindness of one or both eyes to a lowering of visual acuity to the neighbourhood of 6/24 or 6/36.

It should not be difficult to diagnose the presence of organic disease or disability. In disseminated sclerosis, however, this may not be very easy. The main difficulty is to be able to state that a given organic condition is sufficient to account for the degree of the symptom. Only experience can tell the ophthalmologist how much visual defect can be expected from an organic condition—in other words, whether or not an "organ–symptom parallelism" is present in any particular patient. This difficulty is encountered particularly in fairly high astigmatism. It is often not possible to state definitely that a patient whose 3 dioptres astigmatism has been corrected with a lens should see more than the admitted 6/24. If the condition is bilateral the question of amblyopia does not arise in such cases.

A detailed investigation into the nature of the symptom should now be made. Most symptoms can be analysed and the component parts found to have a certain parallelism with each other. With vision, investigation into this "symptom parallelism" can be carried out in different ways.

The two main methods used in this department are tests of visual fields and the plotting of vision correlation curves. The visual field tests are well known, and are dependent on the fact that the fields for white targets of different sizes have a certain relation to each other and to fields for targets of different colours. In functional conditions the normal relation is upset. For example, the field for a 5-mm. white target may be larger than that for a 10-mm. target in certain meridians. A correlation curve depends on the simple fact that the number of lines read on a Snellen chart varies fairly directly with the distance of the patient from the chart. The acuity is taken at six to eight different distances from the chart, starting at the furthest one. It is important to vary the order in which the acuity at different distances is taken. A graph is then made, using the distances from chart as abscissae and the Snellen lines read as ordinates. In normal cases the resulting graph is almost a straight line. Fig. 1 is an example of such.

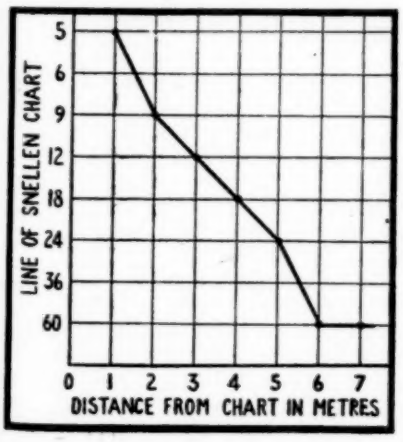

FIG. 1.—Correlation visual curve of a case of refraction error. (Note that the line is almost straight except at the end.)

In functional visual defect the graph is not straight. Fig. 2 shows graphs taken from a soldier with hysterical amblyopia of both eyes.

Important points to elucidate in the psychiatric approaches to such cases are the presence in the patient's history of any eye condition that may have made him "vision-subconscious" and his suggestibility to further acuity of vision during the test. Pentothal sodium is an excellent diagnostic adjunct in cases in which the amblyopia is complete in one or both eyes.

It is the experience in this department that hysterical defects cannot with certainty be differentiated from simulation or malingering by physical tests only. In these tests it is not possible to exclude with confidence the effect of suggestion. The ultimate differential diagnosis between hysteria and simulation or malingering must be based on the psychiatric assessment.

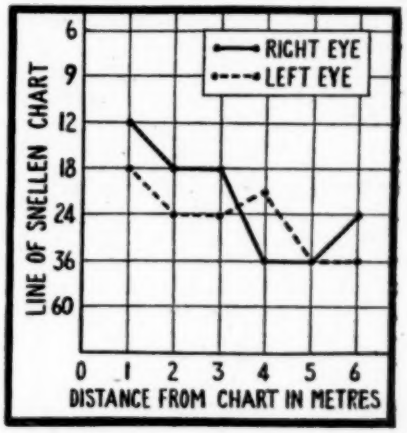

FIG. 2.—Correlation visual curves of a case of hysterical amblyopia of both eyes. (Note variation in direction of curves.)

Treatment of Defective Day Vision

As most of these cases are hysterical the treatment is difficult. The visual defect may be removed by suggestion with or without the use of narco-analysis, but the underlying personality defect persists and may show itself later as a relapse of the visual defect or as a somatic disturbance elsewhere. Patients who have had complete blindness in one or both eyes before treatment are unlikely, in our experience, to become fit to return to a forward area. They may, however, carry out useful duties at the base for a long time. Indeed, a relapse may never occur if the precipitating factor of the emotional disturbance has been removed. Patients who have a partial loss of vision —to, say, 6/24—do not seem to do well, and often require to be invalided. It is important to have the help of a trained psychiatrist in the diagnosis, and especially in the disposal of cases of severe hysteria. In the exigencies of war, however, it is rarely possible for him to effect the profound personality change necessary for the permanent removal of the underlying cause of the patient's symptoms.

Defective Night Vision

Defective vision in the dark is a common complaint among troops. Most of these patients state that in the dark it was necessary for them to take a companion's arm. This is a convenient mode of assessing the symptom, as it supplies a certain relative quality to the patient's complaint. Many state that they had bumped into objects in the dark or fallen into slit-trenches. Of this it must be said at once that there are few people who have not had similar experiences since the institution of the black-out.

Defective night vision may be a symptom of organic disease. It may be found in moderate as well as high degrees of myopia, in choroiditis, retinitis pigmentosa, vitamin A deficiency, and toxaemia. Every patient complaining of this symptom should be examined for these conditions. During the past six months three cases of retinitis pigmentosa were seen in this hospital. It must be borne in mind that defective night vision may precede the appearance of the pigment in the retina. During the past year we have seen only one case in which food deficiency was a possible cause. There was one case of alcoholism, and it is suggested that inquiries into this condition should be made in every instance.

Measurements of vision in the dark are made on a dark adaptometer. For this purpose Koch's modification of the Hecht apparatus is used. With it a sufficiently accurate measurement of the minimum light and form senses can be obtained. The light minimum can be measured from 2 to 6 micro-millilamberts (log units—μml.). The minimum form sense is measured by the amount of light necessary to determine the

letter "E" 10 mm. in size and placed 380 mm. from the eyes. As the "E" can be revolved a check on the patient's accuracy can be made. The minimum light sense is usually examined after 3 and after 30 minutes' dark adaptation. The minimum form sense is examined after 30 minutes' dark adaptation. The following are normal figures on this instrument:

Minimum light sense: 5.2 μml. after 3 minutes
3 μml. after 30 minutes
Minimum form sense: "E" recognized by 30% with 4.2–5.5 μml.

In pathological conditions there is usually a fairly parallel diminution in minimum light and form senses. In functional conditions there may be a gross disturbance in this "symptom parallelism." For example, in repeated cases of neurosis with complaints of defective night vision the minimum light sense after 30 minutes' dark adaptation was in the proximity of 3 μml., yet the "E" was not perceived at this point even with 6 μml. This lack of "symptom parallelism" is similar to that already described above, and in some cases may be of help in the diagnosis of functional night-vision defect. It should be noted that in apparently normal subjects not complaining of defective night vision it is not unusual to find a poor minimum form sense in tests with the dark adaptometer. Another helpful example of symptom inconsistency is that the figures obtained for the light and form senses may vary from day to day. This, in our experience, does not occur in any organic eye condition.

Men complaining of defective night vision and not showing any physical defect should be examined by a psychiatrist. Particular investigation should be made into the reaction to dark during childhood and the incidence of defective night vision in the soldier's unit and among his friends. In connexion with the suggestibility of the patient, the use of the phrase "night blindness" on any document to which the soldier has access should be strictly avoided. It is a fluent phrase easy to remember and quickly passed from mouth to ear.

Treatment of Defective Night Vision

Cases of functional defect of night vision are rarely amenable to direct psychiatric treatment, although they may be somewhat helped by rest and change of environment. Disposal should not be based on one investigation of the dark adaptation alone. It should be repeated several days later. If the minimum form and light senses are both within normal the patient should be reassured and returned to his unit in his original category. If the symptoms are severe and are supported by findings with the dark adaptometer he should be examined by a psychiatrist, and the ultimate disposal will depend on the psychiatric findings. In this connexion it is recommended that all those in one area complaining of defective night vision should be seen by one ophthalmologist, who is then in a position to detect a tendency towards "infectious spread" in any unit. Everybody has some difficulty in moving about in the dark, and the requirements of the Service or a danger of the complaint spreading may easily modify the suggested disposal to a more stringent one.

Diplopia

Diplopia is a common functional symptom. It may vary from a momentary slight separation into two images to a constant and well-defined double vision. To investigate the possibility of organic origin the usual tests for muscle paresis, muscle spasm, convergence weakness, concomitant squint, and muscle imbalance should be carried out. Most of the functional diplopia in the Army is found in the following types of cases.

(*a*) There may be a concomitant squint which has been present since childhood without giving rise to diplopia until recently. In civilian life it is very uncommon to find diplopia in an adult with concomitant squint. Yet such cases due to emotional stress are seen in this department almost every week. In these an organic condition is present, but the symptom-effect is not parallel with it. It is an interesting fact that suppression of one image that took place at, say, the age of 5 years and has persisted since should after two decades be functionally removed.

(*b*) There may have been a muscle imbalance which has persisted for years without causing diplopia. During these years the duction power has sufficed to overcome the tendency to squint. Under conditions of emotional strain this duction power may break down, when a small-degree horizontal or vertical squint with diplopia results.

(*c*) The functional disturbance may produce a spastic squint, which is usually convergent. Three such cases seen in this hospital during the past year were due to spasm of the internal rectus muscle. Ocular movements in these cases were good, if inclined to be jerky. The diplopia was found only in the central part of the field, both images coming together as the object was moved to the right or the left.

(*d*) The functional disturbance may produce a partial or complete loss of convergence. The diplopia is most marked at near vision. Some cases of partial loss of convergence are associated with exophthalmos, as will be mentioned later.

Treatment of Diplopia

Spastic squint and convergence loss may be cured by psychiatric measures alone. The results may be immediate and very striking. In these conditions there has presumably been no pre-existing organic disability.

Treatment of hysterical diplopia associated with concomitant squint or muscle imbalance that has become a squint is very difficult. I have not seen a case which has been cured by psychiatric measures alone. With these cases it is best to use both the psychiatric and the physical approaches. As the first measure the patient should be given some insight into his condition by the psychiatrist. Stress is laid on this being done before prisms or operation are tried. There are two reasons for this order in the treatment. In the first place, it prepares the patient to accept the later optical or surgical help. The operation cannot be guaranteed to have the necessary precision, and the patient should know beforehand that he must contribute to the cure. In the second place, the patient's confidence in his physicians is maintained. If he is sent to a psychiatrist after incomplete cure of his diplopia by surgical measures he is inclined to think that he is being passed to another doctor in view of the surgical failure; or, in his own words, that he is "being messed about."

Should psychiatric, surgical, and prismatic treatment fail, the patient should be made uniocular by placing a frosted glass before one eye. He should then be categorized "B1 (Base only)." Even then he may have the last word by developing photophobia in the used eye.

Asthenopia

Ocular fatigue is fairly commonly functional in origin. In many cases there is a small refraction error, which, however, under other circumstances might not have been expected to cause any symptoms. Whether or not glasses should be prescribed for any individual case depends on the experience of the ophthalmologist. It is felt that there is over-prescribing. Yet a fair balance is difficult in the midst of a large out-patient day, and the patient is often given the benefit of the doubt.

Phorias and convergence insufficiency should be examined for in these borderline cases. It should be remembered that a certain degree of exophoria at near vision is normal. It can be invoked to explain asthenopia only if the positive duction power is not sufficient to control the degree of exophoria. If the muscle balance and the duction powers are within normal, and if after the use of suitable lenses the patient continues to complain of fatigue and strain, the case in the great majority of instances can be considered to be functional.

In considering asthenopia mention should be made of the poor lighting conditions found in many Army offices. These should be inspected periodically by the D.A.D.H. in conjunction with the ophthalmologist of the area.

Headache; Photophobia; Muscae Volitantes; Epiphora

These form a well-defined group of symptoms, all or some of which are often found in the same patient. In the production of some of these symptoms there is probably a disturbance of autonomic control. Unlike the functional diplopia and defective day or night vision which have been referred to as hysterias, this group of symptoms, together with asthenopia, may be more properly defined as the chronic anxiety state with ocular manifestations.

The headache is usually retro-ocular or bitemporal. It is often felt on the side where one eye has had some chronic defect, such as amblyopia. Practically any adjective may be used by the patient to describe the pain. It may or may not be associated with the use of the eye. It is often evoked by

exercise or excitement. The pain never wakens the patient during the night, although he may waken in the morning with it. This symptom, like all those mentioned in this report, is frequently associated with a change of environment. In many respects the photophobia runs parallel with the headache. It, too, may be unilateral, and be felt on the side on which, as the patient is aware, there is ocular inferiority. Dark glasses are often worn on days not much, if any, brighter than can be experienced on summer days in Britain. Their use appears to have a symbolic significance to the patient. As stated, muscae volitantes and epiphora are often associated with photophobia and headache. Like them, they are very variable in their incidence: days may pass without the patient experiencing them.

Before making the diagnosis of chronic anxiety state with ocular manifestations it is, of course, important to exclude organic disease. The media of the eyes, fundi, and tear ducts should be investigated.

It is interesting to note in connexion with the disturbance of autonomic control which is suspected to be the basis of this group of symptoms, that a number of cases presenting the syndrome of headache, epiphora, and photophobia later develop exophthalmos with a well-marked von Graefe sign. In them there is not necessarily thyroid enlargement or increase in pulse rate. As mentioned above, such cases may have a partial loss of convergence, with diplopia.

Treatment of Chronic Anxiety State with Ocular Manifestations

The treatment of chronic anxiety state with ocular manifestations is more satisfactory than that of ocular hysteria, and in many cases can be satisfactorily carried out by the ophthalmologist. The qualities required are patience, kindliness, and directness. It is easy to advocate these qualities, though difficult to show them in the rush of the clinic. Nevertheless no good treatment of the chronic anxiety state can be carried out without them. There must be patience to listen to the man's story, to watch his mind during the examination, to evoke his past life and environment, and to interrogate his emotions so that the hidden anxiety state may be exposed. This must not be done in a gruff manner, otherwise the patient becomes defensive and more tongue-tied than ever. There must be directness to impress him that no disease of the eyes is present and to indicate the manner in which the symptoms arose. There are few patients who do not intelligently and emotionally respond to this treatment.

Summary and Conclusions

In this report mention has been made of (*a*) the two chief psychical conditions—hysteria and chronic anxiety state—which cause a variety of ocular symptoms; and (*b*) the differentiation of these functional symptoms from those produced by organic disease.

For clarity the psychosomatic processes have been described as well-defined entities. These processes are personality reactions, and although the individual may show a tendency to react in a certain way, personality is too complex for the reaction to be simple and uniform. In practice many a case does not fit into a clear-cut pattern. An obvious hysteric may develop symptoms described above as chronic anxiety state with ocular manifestations, while a case with hysterical symptoms in the eyes may have a well-developed chronic anxiety state. Moreover, the difficulty is not only as between one functional condition and another. Both an organic and a functional condition may be present in the same patient. Their relative significance in the production of the symptoms is of therapeutic importance. Only a very careful physical examination together with some considerations along the lines indicated above, and the experience of the examiner, can help disentangle the threads.

It may be of some help to think of organic and functional disturbances coexisting in one of three different ways: (1) The association in one patient may be fortuitous. (2) A functional disturbance may be superimposed upon an organic one, modifying or aggravating the symptoms. (3) The psychic disturbance leading to upset of ocular function may appear to be an integral part of the organic process. This is noticed in disseminated sclerosis. It is not unusual in this disease for the "functional" symptom to be the predominant one and to be present for a long period before the "organic" symptoms arise.

I would like to express my thanks to Brigadier C. W. Graham, Consultant Ophthalmologist, Brigadier G. W. B. James, Consultant Psychiatrist, M.E., Major J. M. M. Jacobs, and the staff of No. 2 Psychiatric Centre for their generous guidance and help. Many of the cases were diagnosed and treated in No. 2 Psychiatric Centre.

HUMAN FIBRIN AS A DRESSING FOR BURNS*

BY

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The copious and continued oozing of fluid from a superficial burn is a curious contrast to the behaviour of an abrasion, which soon becomes covered by a scab of dried and clotted exudate. It is clear that the normal mechanism of haemostasis is unable to control the exudation of plasma from the capillaries at the surface of a burnt area. It is a temptation to think that the delay in healing of such burns as compared with abrasions of equal magnitude may be the result of this continued oozing, since in the haemorrhagic states even minute wounds may refuse to heal for weeks unless leakage of blood is stopped by suitable treatment. It is certain that in severe cases the loss of fluid from the burnt area may be so great as seriously to aggravate haemoconcentration, and a practical method of controlling this loss would be of clinical importance.

Attempts were made, therefore, to control this exudation by means that are usually successful in controlling the exudation of blood in the haemorrhagic states. To begin with, various coagulants, such as Russell viper venom and thrombin, were applied to the surface of burns, but any hastening of coagulation that was produced appeared ineffective.

It was observed that blisters forming soon after a burn usually contained masses of loose trabeculated fibrin that had no controlling effect on the exudation of fluid. The "blister fluid" that was drawn off and examined contained a further small amount of fibrinogen and often underwent secondary clotting in the test-tube, suggesting that the clotting mechanism was not seriously deranged. Unfortunately it was not possible to make quantitative estimations of fibrinogen and prothrombin on the exudate before it had partially clotted. Experiments with blister fluid showed that it differed little from the patient's serum. Titration of the immediate antithrombin, the progressive antithrombin, and fibrinolysin gave results essentially the same as those obtained with the blood serum. From these observations it appeared that the continued exudation of fluid might be the result not of defective coagulation but of a capillary defect, so that the local condition might be analogous to the continued bleeding in the purpuras, in which coagulation is normal. No effect would therefore be expected from the mere addition of coagulants to the issuing fluid: as in the purpuras, the flow must be stopped by mechanical means.

It was therefore decided to attempt to seal the burnt surface with some relatively impervious dressing. Human fibrin was chosen as the physiological ideal, and it was hoped that its presence might reproduce the conditions in traumatic wounds and encourage healing. After unsuccessful attempts to produce a sufficiently tough and adherent membrane by covering the burn with concentrated fibrinogen solution, or dried fibrinogen subsequently clotted by a spray of thrombin, it was decided to preform the fibrin membranes and apply them when required.

Preparation of the Fibrin Membrane

The technique that finally evolved was as follows: Human plasma was allowed to clot in flat shallow dishes. The ordinary photographer's earthenware developing-dish about 12 in. by 10 in. was found satisfactory. Before adding the plasma the dish was levelled with a spirit level in order to ensure even thickness of the membrane. About 450 c.cm. of plasma was used for each membrane, and this was mixed with 100 c.cm. of 1.18% $CaCl_2$ and 0.5 c.cm. of 1 in 100,000 Russell viper venom, in a large measuring cylinder. The mixture was rapidly poured into the dish and any large bubbles burst with a hot wire. Firm coagulation usually took place in from a half to one minute. The clotted plasma was allowed to stand for 30 minutes and was then covered with about 500 c.cm. of tap-water. By gently rocking the dish the clot was detached from the sides so that it floated freely in the water. It was

* A report to the Burns Subcommittee of the M.R.C. War Wounds Committee.

then covered with a sheet of blotting-paper cut to fit the dish, and this in turn by a sheet of perforated zinc of the same size. By pressure on this sheet much of the serum in the clot could be squeezed through the blotting-paper and perforations. Water and serum were then poured away, and by careful inversion the clot was turned out, lying on the blotting-paper and zinc. These were now laid on a draining-board, and the upper surface of the clot covered by another sheet of blotting-paper and perforated zinc. Pressure on this expressed the remainder of the serum.

On removing the blotting-paper the clot was found to have been compressed into a thin sheet of yellowish fibrin. This was carefully washed in water until white, and then pressed between sheets of dry blotting-paper. The finished membrane is a tough, elastic, glistening white sheet when wet; when dry it becomes transparent and brittle.

Sterilization of the Membranes

The membranes, suspended in saline in small screw-capped bottles, were usually treated by heat. Though they resist boiling, the fibrin becomes thickened and waterlogged and loses much of its elasticity. Heating to 80° C. for one hour or 70° C. for two hours was found to be less deleterious and to kill non-sporing pathogens incorporated experimentally in the fibrin, and this treatment was used throughout the clinical trials.

In Dr. Colebrook's laboratory experiments on sterilization by antiseptics and bacteriostatics were carried out. Small experimental membranes were made from plasma to which cultures of *Staph. aureus, Bact. coli,* streptococci, and *Ps. pyocyaneus* had been added. These infected membranes were incubated for varying periods in different concentrations of C.T.A.B. (cetyltrimethylammonium bromide), 2:7-diaminoacridine, dettol, sodium sulphacetamide, sulphanilamide, etc. The pieces of fibrin were then removed from the solution, washed in sterile water, and planted out in broth. It was found that the C.T.A.B. completely dissolved the fibrin in 24 hours, and even after three hours the membrane was partly destroyed. The organisms were not killed by three hours' immersion in 1.5% C.T.A.B. 24 hours' immersion in 30% dettol sterilized the membrane, but also partly destroyed it. Sulphanilamide (2%) and sodium sulphacetamide (20%) did not damage the membrane, but organisms were still viable after 24 hours.

The 2:7-diaminoacridine stained the membrane a bright red, but did not impair its properties. 24 hours' immersion in this substance killed all the organisms named when the dye was in concentration of 1 in 1,000. When it was reduced to 1 in 10,000 the coliform organisms and staphylococci remained viable.

Preservation of the Membrane

All the membranes used in the clinical trials had been "pasteurized" by heat. One, in addition, had been preserved in 1 in 10,000 diaminoacridine. After two or three weeks' immersion in saline, even in the refrigerator, membranes begin to lose their toughness and finally to disintegrate. Various preservatives have been tried without effect. Freezing the membranes retards the deterioration to some extent. In the dry state they appear to keep indefinitely and to regain their elasticity when soaked in water. They are so brittle when dry, however, that it is almost impossible to handle them without breaking, and as a method of preservation it was found impracticable.

Application of the Membranes

Several methods of sticking the membranes to the burnt surface by means of freshly formed fibrin were used, all of which gave firm adhesion. At first the burnt area, after being cleaned, was sprayed with fresh human plasma to which enough calcium chloride had been added to produce clotting in three or four minutes. The membrane was then spread over the surface, smoothed down, and the edges trimmed with scissors. Subsequently plasma was applied to the burn as before, but coagulation was produced by a solution of thrombin, in which the membrane had been soaked before application. In one case the membrane was applied over a burnt surface that had been covered with powdered fibrinogen, the membrane having been moistened with thrombin. This latter modification was not so successful, as the powdered fibrinogen contained air, which formed bubbles as it went into solution.

Clinical Results

Eight cases of accidental burns and two experimental burns have been treated by the application of about 17 sq. ft. of preformed membrane made from human fibrin. Two cases were in the Radcliffe Infirmary, under the care of Dr. J. M. Barnes; the remainder were at the Royal Infirmary, Glasgow, under the care of Mr. A. M. Clark and Dr. L. Colebrook. A brief summary of these is given below.

Case 1.—Male aged 31, admitted July 26, 1941, three hours after petrol burns of hands and forearms and circumference of right leg. The burns were cleaned under general anaesthesia; the hands and arms were encased in plaster and the leg was covered by a fibrin membrane over a film of recalcified plasma. A small area of the leg that could not be covered with fibrin was tanned. Within three hours the membrane had become transparent and a few drops of fluid exuded through it. For the next three days the membrane remained intact and firmly adherent, but the small tanned area began to suppurate. Then the centre part of the membrane softened and was digested, and culture from this area showed infection with *Staph. albus.* The membrane was removed, the area which was then granulating was powdered with sulphanilamide and penicillin, and a new membrane applied. This dried into a transparent scab, which began to flake off from the edges as new epithelium appeared. Healing was complete in 17 days. The plasters were removed from the hands and arms a day later, and here also healing was complete except for a few small blisters.

Case 2.—Male aged 19, admitted May 4, 1941, 24 hours after sustaining severe burns, multiple fractures, and lacerations in an aeroplane crash. The burns were treated by various methods. About 10 weeks after admission fibrin membranes were applied to four suppurating areas on legs and body. One of these was allowed to dry in air, and remained intact for three weeks, though a small amount of pus formed under a fold that had become detached. When removed there was evidence of active healing beneath it, and a second membrane was applied; but there was considerable formation of pus, and it was removed 12 days later without much evidence of further healing. Two other membranes were applied to suppurating areas on the chest and shoulders, and were kept moist by an oiled-silk dressing. In both cases the fibrin was completely digested over the whole of the raw area within 24 hours of application, and each area then healed within a few days without further applications.

Case 3.—Male aged 14 months, admitted Oct. 7, 1942, one hour after extensive scalding of back and thigh with boiling water. The burnt area was cleaned under general anaesthesia, and the upper two-thirds covered by a fibrin membrane, over plasma and thrombin. Sulphanilamide cream was applied to the remainder of the burnt area. During the next two hours there was some exudation of fluid from the area not covered by the membrane, though the membrane itself was dry. Two days later there was some elevation of small areas by collections of fluid beneath the fibrin, and five days after application part of the centre had been digested. Healing appeared to be almost complete under the peripheral parts of the membrane that remained. Seven days after the burn the membrane had flaked off and healing was progressing, except in the centre of the area originally covered, where there was a brown slough. The area of the burn treated with sulphanilamide cream appeared to be healing equally well. The sloughs finally separated nearly a month after the burn, and it was decided to graft that area.

Case 4.—Male aged 5, admitted Oct. 12, 1942, two hours after scalding scapular areas and buttocks with hot water. After cleaning, membranes were applied to the two burnt areas on the left side, those on the right being treated with sulphanilamide cream. Two days later it was found that the membranes had stuck to the gauze coverings and were only adherent in places to the burnt areas. There had been some discharge from this side. Four days after application the membranes became detached completely, leaving a clean surface that looked very similar to that on the other side, treated with cream. Healing on both sides was complete within two weeks.

Case 5.—Male aged 27, seen as an out-patient on Oct. 12, 1942, six hours after petrol burn of dorsum and fingers of right hand. The burnt area was cleaned and covered with fibrin membrane cut to fit, and bandaged over gauze. The membrane dried into a hard scab, which remained *in situ* for 10 days, when it separated, showing complete healing beneath.

Case 6.—Male aged 2, admitted Oct. 14, 1942, two hours after scalding chest and left arm with hot tea. After cleaning, a small area on the arm was covered with membrane, the rest being dressed with sulphanilamide cream. Within an hour of application the membrane became dry and transparent. Unfortunately the child died suddenly 11 hours later.

Case 7.—Male aged 5, admitted Oct. 15, 1942, two hours after scalding left arm, back left side, and left leg with hot water. After plasma transfusion the area was cleaned, the arm being covered with a fibrin membrane, the remainder dressed with sulphanilamide

cream. The membrane remained intact for eight days, when it separated. The lower part of the arm had healed; all the rest of the original burnt areas were covered by brownish sloughs, which separated 11 days later, leaving granulating surfaces, which it was decided to graft.

Case 8.—Female aged 27, seen as an out-patient 24 hours after scalding leg with boiling water. After cleaning, a membrane was applied, with almost immediately relief of pain. The membrane dried up, but two days later a small area in the centre became digested. Healing proceeded rapidly under the intact parts of the membrane, and was complete in 12 days.

Experimental Burns

Burns were produced on the upper part of the extensor surface of the forearms by the application of the end of a copper cylinder, 1 in. in diameter, through which hot water was flowing. The apparatus was devised by Prof. R. A. Peters (Leach, Peters, and Rossiter, 1943). The results are set out in tabular form below:

Subject I (R. G. M.)

Time	Left Arm	Right Arm
0	56° C. applied for 45 seconds	56° C. for 50 seconds
30 mins.	Blistering and detachment of cuticle over whole area. Covered by fibrin membrane and left exposed to air. Immediate relief of pain	Blistering and detachment of cuticle over whole area. Covered by fibrin membrane, then by oiled silk to keep moist. Pain relieved
3 hours	Membrane has dried into hard transparent film where attached to skin; soft and pliable over burnt area. No pain	Membrane unfortunately torn off when boarding a moving tram. Area oedematous and inflamed. Dressed with castor oil and sulphanilamide
24 hours	Membrane dry and firmly attached. No oedema. No other covering. No pain or discomfort	Painful and tender. Discharging pus. Redness over area 3 in. in diameter. Oedema over area 4 in. in diameter. Re-dressed, with relief of pain
48 hours	Membrane covered with dry gauze and strapping to prevent accidental detachment. Perfectly comfortable and painless	Painful and swollen. Culture: *Staph. aureus*
4 days	Apparently healed under membrane, which is now quite dry	Oedema of whole forearm. Dressed with penicillin
6 days	Membrane flaking off, leaving new epithelium	Better, but still swollen and painful. Re-dressed
8 days	Completely healed	As before
10 days	—	Better; beginning to dry up
12 days	—	Scab formation
3 weeks	—	Scab flaking off, leaving new epithelium
4 weeks	—	Healed
9 months	No scar	Obvious scar

Subject II (L. C.)

Time	Left Arm	Right Arm
0	56° C. for 60 seconds	56° C. for 60 seconds
40 mins.	Detachment of cuticle. Dressed with sulphanilamide cream under oiled paper. Relief of pain	Detachment of cuticle. Dressed with fibrin membrane. Relief of pain
24 hours	No pain or swelling. Re-dressed as before	No pain or swelling. Some leakage of fluid beneath loose corner of membrane
48 hours	No pain, no swelling. Re-dressed as before	No pain or swelling
4 days	Some inflammation and oedema round burn, which is covered by a film of yellow exudate. Allowed to dry in air	Membrane dry and firm. No inflammation or oedema
6 days	Dry and comfortable	Some oedema and discomfort. Infected with *Staph. aureus* and diphtheroids. Fibrin membrane digested. Dressed with penicillin
9 days	Hard scab	Hard scab
11 days	Healed	—
12 days	—	Healed

Conclusions

It is clear that the covering of burnt areas with an adhesive membrane of human fibrin is a comparatively easy procedure. From the results, however, it will be seen that any clinical advantage over orthodox treatment is so slight as to make the trouble involved in preparation and application hardly worth while. The membranes relieve pain rapidly and form comfortable dressings, but the same can be said equally of many other applications. They may, to a certain extent, reduce fluid loss during the first 24 hours, but it would probably be more economical to transfuse the patient with the plasma required to make the membrane. In the cases that became infected the membranes were rapidly lysed. In favourable cases the membrane dried into a scab, and healing proceeded beneath this. Even so, however, healing did not appear to be much more rapid than was the case in other areas treated differently.*

The problem of the fluid loss from burnt areas still remains, and its causation is of obvious interest and importance. That it is due mainly to paralysis or disordered function of the capillaries seems probable. Attempts to restore this capillary function might be therapeutically profitable.

I wish to thank particularly Dr. L. Colebrook for his kindness and advice in Glasgow, Prof. J. W. S. Blacklock for providing laboratory accommodation, and Dr. J. M. Barnes for allowing me to apply this form of treatment to his cases in Oxford. I am also indebted to Prof. R. A. Peters for advice and interest. My gratitude is due to the Medical Research Council for financial assistance and to Glaxo Laboratories Ltd. for the gift of special apparatus that was used in the experiments on blood coagulation and the preparation of fibrin, thrombin, and fibrinogen.

REFERENCE

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OUTBREAK OF SANDFLY FEVER IN TWO GENERAL HOSPITALS IN THE MIDDLE EAST

BY

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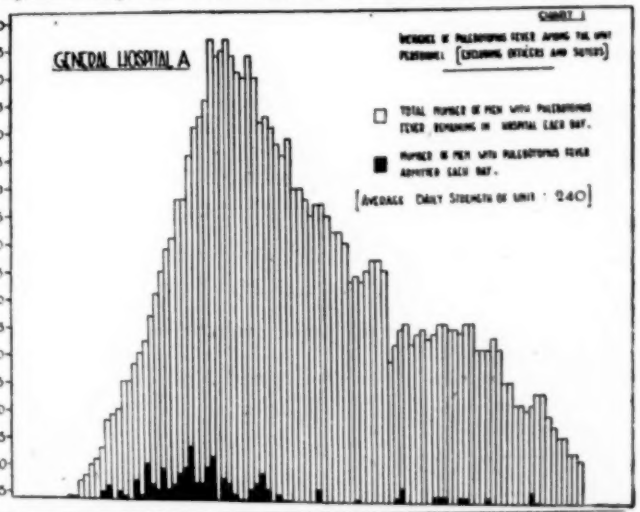
From July 28 to the end of Oct., 1942, there was a severe and explosive outbreak of sandfly fever among the staffs of two general hospitals and among the patients admitted to one of them. These two hospitals came to a new station during the last week of July. They occupied newly made sites, side by side. Hospital A took over the site and patients of another hospital which had been working since early June, 1942. Hospital B did not receive patients until the beginning of September.

Within a few days of arrival members of the staff of both units began to get sandfly fever, other ranks being more affected than officers and sisters. Later, patients who had been admitted to Hospital A for other complaints contracted the disease. By the end of August the epidemic had become serious. It ceased abruptly at the end of October.

Incidence of Sandfly Fever among Unit Personnel

Several of the "other ranks" had two or more attacks, which explains why the total number of admissions exceeded the



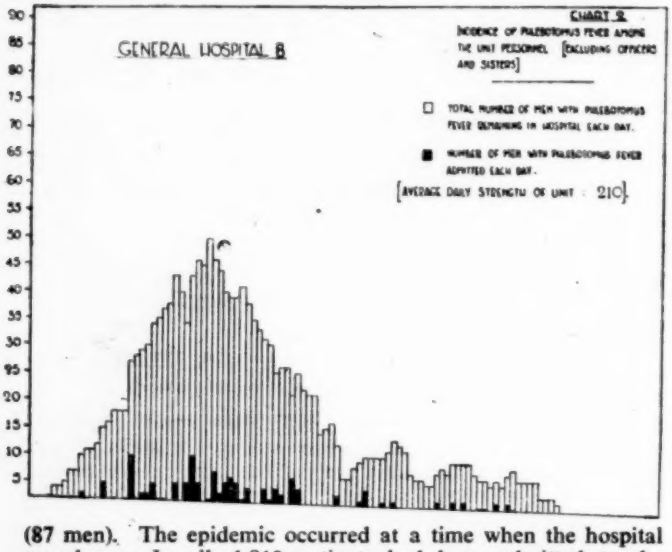
* Since submitting this report I have learned through the Medical Research Council that Ingraham and Pering of Harvard Medical School are using fibrin membranes "plasticized" by glycerol to prevent them becoming brittle, and sometimes backed with cotton. These improved membranes have given good results as a dressing for burns, and particularly as a dural substitute in brain surgery. Fibrin has also been used as a haemostatic. I have used small pieces of fibrin membrane soaked in thrombin as a haemostatic dressing for haemophilic cases with very encouraging results.

total strength. Even so, the majority of N.C.O.s and men suffered from the disease.

Hospital A

	Total Admissions, including Readmissions	Average Total Strength
Officers	8	30
Sisters	20	80
Other ranks	282	240

Chart 1 shows the number of other ranks admitted each day and the number remaining in hospital. It will be seen that for fifteen consecutive days from Aug. 27 to Sept. 10 there were over 70 men in hospital. The peak was reached on Sept. 2


GENERAL HOSPITAL B
CHART 2
INCIDENCE OF PHLEBOTOMUS FEVER AMONG THE UNIT PERSONNEL (EXCLUDING OFFICERS AND SISTERS)
TOTAL NUMBER OF MEN WITH PHLEBOTOMUS FEVER REMAINING IN HOSPITAL EACH DAY.
NUMBER OF MEN WITH PHLEBOTOMUS FEVER ADMITTED EACH DAY.
[AVERAGE DAILY STRENGTH OF UNIT : 210]

(87 men). The epidemic occurred at a time when the hospital was busy. In all, 1,910 patients had been admitted to the medical division alone between July 29 and Sept. 30.

Hospital B

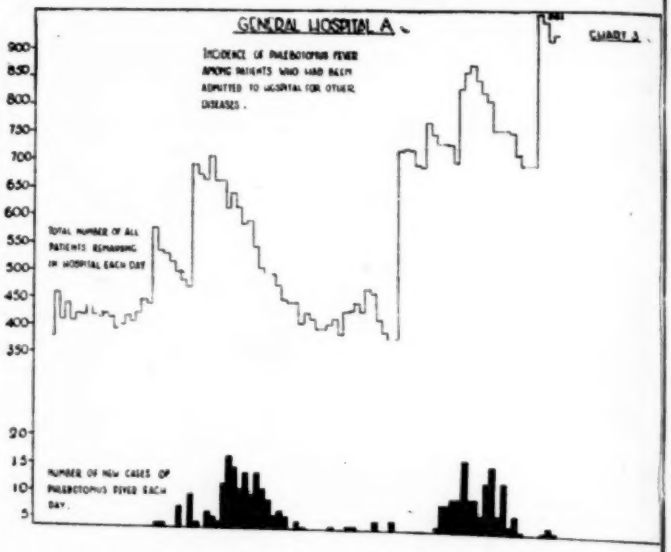
	Total Admissions, including Readmissions	Average Total Strength
Officers	12	28
Sisters	12	30 to 80
Other ranks	171	210

Chart 2 shows the figures for Hospital B. The epidemic was less severe than at Hospital A, but was nevertheless serious. The peak was reached on Aug. 26, when there were 50 men in hospital. In addition to the 171 cases admitted to hospital at least 30 more N.C.O.s and men were treated in their tents. The unit was not working to capacity, since patients were not received until the beginning of September.

Incidence of Sandfly Fever among Patients admitted to Hospital A for Other Diseases

At Hospital A 365 patients who had been admitted for other diseases developed sandfly fever. Chart 3 shows the daily incidence of the disease and also the total number of patients in hospital. It will be seen that there were two periods when the total number of patients in hospital was greatest—that is, shortly after the admission of fresh convoys of patients.

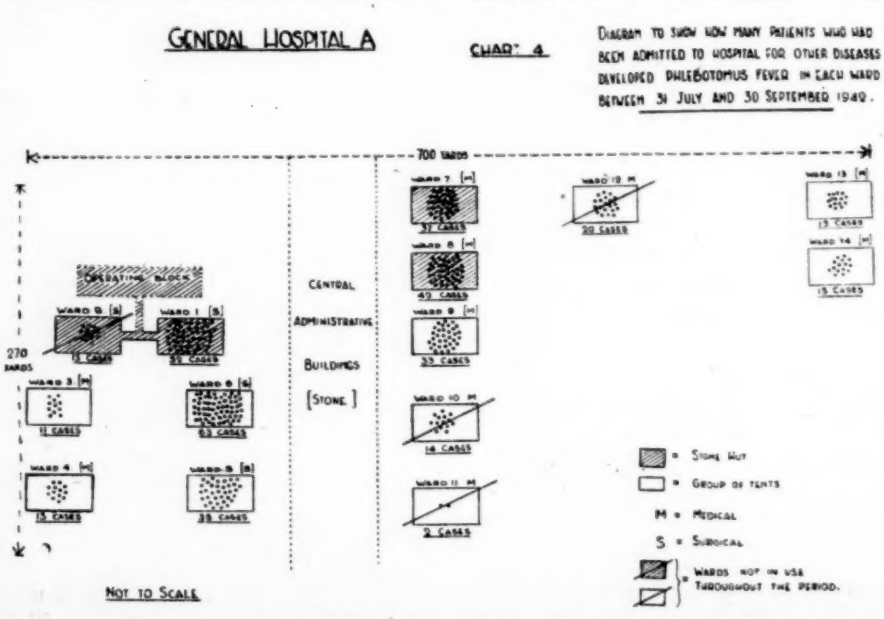
The distribution of the disease in the wards of Hospital A is interesting (see Chart 4). With the exception of wards 2, 10, 11, and 12, which were not in use until October, all wards contained approximately the same number of patients throughout the period of the epidemic. The incidence of sandfly fever was greatest in surgical wards 1 and 6, and lowest in medical wards 3 and 4. Ward 1 was a stone ward, whereas ward 6 was a group of tents. Hence it appears that the incidence did not depend on whether the wards were "hutted" or "tented." It will be seen from Chart 4 that the situation of the ward was important. The camp was newly constructed


GENERAL HOSPITAL A
CHART 3
INCIDENCE OF PHLEBOTOMUS FEVER AMONG PATIENTS WHO HAD BEEN ADMITTED TO HOSPITAL FOR OTHER DISEASES.
TOTAL NUMBER OF ALL PATIENTS REMAINING IN HOSPITAL EACH DAY
NUMBER OF NEW CASES OF PHLEBOTOMUS FEVER EACH DAY.

and, although it was largely tented and widely dispersed, there were some huts built of stone and the ground was stony. Much stone and rubble lay around and near the buildings. Where this was greatest—around wards 1 and 6 and also around wards 7, 8, and 9—the incidence of the disease was high. Where this was least—around wards 3 and 4 and particularly 13 and 14—it was low. This accords with the known habitat and short flight of the phlebotomus.

Clinical

The clinical picture was classical. One of us (E. R. C.) has seen many outbreaks of "short-term fevers," but none in which the symptoms and signs agreed so exactly with the standard descriptions of sandfly fever. The incubation period in most instances was unknown, but in a few there was reasonable evidence that it was as short as 3 days. Cases occurred exactly 3 days after men had arrived from another country.


GENERAL HOSPITAL A
CHART 4
DIAGRAM TO SHOW HOW MANY PATIENTS WHO HAD BEEN ADMITTED TO HOSPITAL FOR OTHER DISEASES DEVELOPED PHLEBOTOMUS FEVER IN EACH WARD BETWEEN 31 JULY AND 30 SEPTEMBER 1940.
700 YARDS
270 YARDS
OPERATING BLOCK
CENTRAL ADMINISTRATIVE BUILDINGS [STONE]
NOT TO SCALE
= STONE HUT
= GROUP OF TENTS
M = MEDICAL
S = SURGICAL
= WARDS NOT IN USE THROUGHOUT THE PERIOD.

The onset was usually abrupt, with severe headache — particularly supra-orbital headache—pain in the back, and fever. There was pain behind the eyes, and especially on movement of the eyes. Sometimes there was pain in the thighs and along the line of the ribs, or dysuria. When the patient reported sick the temperature was usually raised

to 102° or 103°, but occasionally the initial symptoms preceded the fever by 14 hours. Conjunctival congestion and pain on pressing the eyeballs were a common finding. The fever lasted from 1 to 8 days, but in most cases from 3 to 4 days. In about 10% there was a short secondary rise of temperature, usually about the 6th or 7th day. The initial temperature was sometimes over 105°, and the prostration was great. Many of the patients appeared very ill, and in a few instances the photophobia was agonizing. Drowsiness was sometimes pronounced, and in one patient the cerebrospinal fluid contained 110 lymphocytes per c.mm. and 90 mg. of protein per 100 c.cm. The colloidal gold test was negative. The disease was often followed by debility and depression. There were no complications and no deaths. Members of the hospital staff were usually off duty for 7 to 12 days and sometimes longer. Several senior N.C.O.s who had never been in hospital before were affected. Some of the patients who had previously suffered from malaria remarked that sandfly fever "knocked them out" far more than malaria.

The classical clinical picture and the known heavy infestation of the camp with the phlebotomus left the diagnosis in little doubt. The *Aëdes aegypti* had not been seen, and dengue could be excluded. Neither malarial parasites nor spirochaetes were seen among the many hundreds of blood slides examined.

Immunity

It is sometimes said that one attack of sandfly fever confers a sound and lasting immunity. This is not our experience. It is true that both hospitals were newcomers to the district. Hospital B had recently arrived from England, and although Hospital A had been in the Middle East for a considerable time, it had been in a district where the disease was unknown among the staff. In the present epidemic 15% of the N.C.O.s and men had two attacks, and some had three attacks, during the three-months period, at intervals ranging from two weeks to three months. The initial symptoms of the later attacks were often as severe as those of the first attack, but the illness tended to be shorter. Between the attacks the men were on duty and felt fit. The attacks ceased abruptly at the end of October. It seems clear that second attacks were not relapses but fresh infections. It is possible that men succumbed to a fresh infection before immunity had developed or that a second attack was caused by a different strain of infection. It appears, however, that one attack conferred little or no immunity in this area.

Control

Antimalarial precautions were strictly observed by the personnel of both units. At Hospital B from September onwards all tents were "flitted" in the evening and half an hour before reveille. Men were ordered to be properly clothed until the sun was well up. These measures had little effect on the incidence of the disease.

At Hospital A an attempt was made to stem the tide of the epidemic among patients in hospital for other diseases. It was obviously impossible to deal with the breeding-grounds of the phlebotomus. This would have entailed concreting or asphalting the whole site. Acting on the assumption that the phlebotomus starts biting at about 9 p.m and continues until the sun is well up, the following measures were adopted early in September and rigorously enforced:

Every patient suffering from or suspected to be suffering from phlebotomus fever was nursed under a sandfly net day and night until he was afebrile. All other patients had their nets lowered from one hour before sunset until the wards had been "flitted" the following morning. Every ward and annexe (including latrines) was "flitted" three times a day—just before wakening the patients, before the evening lowering of the nets, and at "lights out."

A glance at Chart 3 suggests that these measures had little or no effect on the incidence of the disease.

A suggestion was made that the infection might be controlled in the wards by burning pyrethrum powder throughout the night. The epidemic ceased, however, when this suggestion was made.

If there should be another epidemic in the future, it is proposed to carry out a controll d experiment, using the burning powder in two out of four tents in each group of tented wards.

SANDFLY FEVER AND THE RHEUMATIC SERIES

BY

R. L. FERGUSON, M.B., Ch.B.

Surg. Lieut., R.N.V.R.

The similarity between sandfly fever and influenza is generally known, though I have not heard of this fever being associated with the rheumatic series. Towards the end of the Sicilian campaign I had two cases of sandfly fever, and one case which, for want of a better diagnosis, I have named "pyrexia of rheumatic origin"; all three cases bore a remarkable similarity—so much so that I consider them worthy of record.

Case Histories

Case 1.—Diagnosis, sandfly fever. This patient, a leading stoker aged 22, went ashore in Sicily on the evening of Aug. 5, 1943, for recreational leave. On the evening of the 9th he reported to the sick bay, stating that he felt as if he had influenza. His temperature was 102° and his pulse rate 96. He complained of general stiffness of his limbs, intense pain behind the eyes, slight epigastric discomfort, and pain in his abdomen which radiated to the loins. He vomited twice during the evening, before reporting. On examination he was flushed, his conjunctivae were injected, and his tongue was furred. He was suffering from numerous insect-bites on his legs and trunk. His temperature slowly resolved, as is shown on the chart, and his symptoms abated with the diminution of fever. He was given 10 minims of tinct. opii three times a day, and tinct. iodi mitis to the insect-bites; he was also given A.P.C. tablets for the headache.

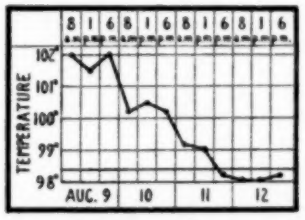


FIG. 1.—Temperature Chart of Case 1.

Case 2.—Diagnosis, sandfly fever. A leading stoker aged 24 went ashore in Sicily on the evening of Aug. 5, 1943. On the morning of the 11th he reported to the sick bay, complaining of intense supra-orbital headache and stiffness at the back of the neck and on the shoulders. He said that he had been feeling "off colour" for 24 hours previously. He complained of general lassitude and tiredness, but otherwise felt all right. His temperature was 101° and pulse 80. Towards the evening he sweated profusely, his face became swollen, and he suffered from severe conjunctivitis. He found difficulty in resting quiet in bed because of generalized aches and pains. There were a few isolated insect-bites on his trunk and legs, and he suffered from nausea and could not take his food. On the 13th the conjunctivitis cleared, but the headache persisted until the 18th. The generalized aches and pains in his limbs settled on the evening of the 15th, and from then on he appeared to be much better. He began taking his food normally, and finally was allowed up on the evening of Aug. 19, after eight days' sickness. He was treated with tinct. opii 10 minims b.d., aspirin and phenacetin aa gr. 5 S.O.S., luminal gr. 2, to help his insomnia.

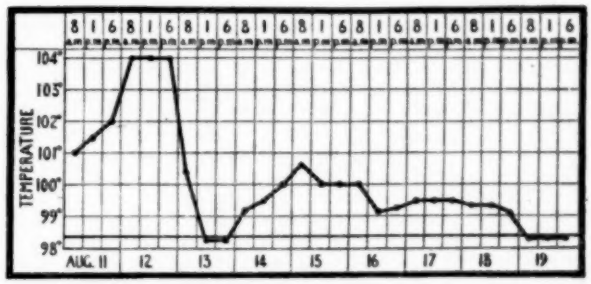


FIG. 2.—Temperature Chart of Case 2.

Case 3.—A leading seaman aged 20 reported to the sick bay on the evening of Aug. 11, 1943, stating that he was suffering from an influenzal attack; he had not been ashore for some time. He said that he had been feeling ill all day, but thought that he would

" try and stick it out." He said he suffered from aches and pains in his back and legs, especially in the muscles of the calf and in both knee-joints. He also had a severe frontal headache. He said that he had had rheumatic fever eleven years previously, and since then had suffered almost every year from similar attacks. In civilian life he went to bed and was attended by his doctor; the last attack was two years previously. On examination his temperature was 104.8° and his pulse 120. The only physical sign detected was a soft presystolic mitral murmur, which was not heard four days after the onset of the pyrexia. He was confined to his hammock and given mist. sod. sal. gr. 20 and luminal gr. 2. The following day he was given mist. sod. sal. gr. 20 and aspirin gr. 10 t.d.s. On Aug. 14 all medicines were discontinued, and he returned to duty quite well.

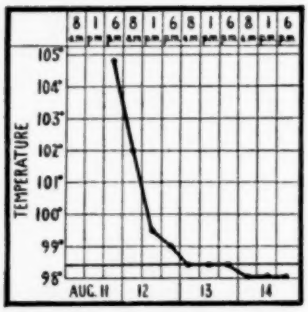


Fig. 3.—Temperature Chart of Case 3.

Owing to the exigencies of the Service at the time it was only possible to obtain blood films from each of the patients on Aug. 12, 1943, and examine them microscopically in a large ship, in order to exclude malaria or leishmaniasis; blood counts were not done. No parasites were seen in a careful examination of the slides. Paratyphoid, dengue fever, and influenza were all considered, and were rejected as improbable. Cases 1 and 2 were diagnosed as phlebotomus fever, and Case 3 as pyrexia of rheumatic origin. These patients suffered from intense supra-orbital headaches and generalized " rheumaticky " pains, which varied in intensity. In all three cases there was absence of severe gastro-intestinal symptoms such as may be expected in the later stages of sandfly fever. The pyrexial period varied between 3 and 8 days. Bradycardia was not noticed in either of the cases of sandfly fever.

Conclusion

Case 3 resembled no particular syndrome with which I am familiar, but appeared to be related to the rheumatic series of diseases.

The cases resembled one another closely, and, by coincidence, occurred at the same time.

Cases 1 and 2 were diagnosed as phlebotomus fever because of the short duration of pyrexia, the presence of insect-bites, and the symptomatology. The fever, as is known, is caused by a virus introduced by the bite of *Phlebotomus papatasii*, which is present in large numbers in Sicily from May to October.

Almost constant " action station " routine caused the patients discomfort owing to the stuffy atmosphere in the ship, but it was possible to treat such cases of high pyrexia on board a destroyer provided that the patient was nursed efficiently.

According to Wenscher (*Dtsch. med. Wschr.*, 1942, **68**, 984) neurological signs aid in the early diagnosis of typhus. The first indication is sudden high rise in temperature, accompanied by a typical and unusually stubborn headache which responds only slightly to analgesics. An additional sign is hardness of hearing, which occurs in almost all cases. If these signs are accompanied by speech disorders and the characteristic twitching of the perioral muscles the diagnosis of typhus exanthematicus is assured even without a distinct exanthema. Therapy consists in relieving the pressure. Apathy or restlessness responds quickly to lumbar puncture; circulation and respiration improve and the distressing headache disappears. Along with the essential support of the cardiovascular system, the main therapeutic concern is the prompt reduction of increasing pressure in the c.s.f. For this reason strophanthin should always be given in strongly concentrated glucose solutions, which exert a dehydrating action. After damage to the vasomotor and respiratory centres, the next most important danger is the occurrence of bulbar paralysis.

Medical Memoranda

An Unusual Form of Ectopia Testis

Sir John Thomson-Walker (1936) quotes Eccles (1903) as considering it extremely doubtful if the testis is ever spontaneously passed into the upper part of the thigh through the femoral ring. The following is the record of such a case.

Cpl. A., aged 43, was admitted to hospital with the diagnosis of right inguinal hernia. Seven years previously, while engaged in heavy work, he felt a sharp pain in the right groin followed by the appearance of a lump; the swelling had remained there since. Examination showed a swelling the size of a hen's egg in the right groin, over the junction of the middle and inner thirds of the inguinal ligament. The swelling was not reducible, felt cystic, and was attached to the deep tissues. The right testicle was present in the scrotum, the left half of which was empty.

Operation showed the swelling to be an ectopic testis which had descended through the femoral ring and canal, and had all the coverings of a femoral hernia. A hydrocele was present; this was aspirated, and the testis then made to retrace its path, the femoral ring being exposed from above as in Lotheissen's operation. Dissection revealed a hernia of the congenital type, the neck of which was very narrow. The fluid in the sac had been restricted to the distal extremity by the constriction to the sac as it passed through the femoral ring, forming a hydrocele of the hernial sac. The spermatic cord consisted only of a fine bunch of vessels, the testicle itself being extremely atrophied.

Two interesting features are that the testis had passed through the femoral ring to gain the upper part of the thigh, and that both normal and ectopic testes were on the same side, the surmise being justifiable that one testis found its way through the femoral ring because the normal passage through the inguinal canal was already occupied.

My thanks are due to Prof. R. C. Alexander, Surgical Director for the area, for permission to publish this case.

T. C. Skinner, F.R.C.S.Ed.,
Surgeon, E.M.S.

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Thomson-Walker, Sir J. (1936). *Surgical Diseases and Injuries of the Genito-Urinary Organs*, p. 844, London.

Recovery after 700-foot Fall

The following case would seem unusual enough to merit being placed on record.

Case Report

A well-built paratroop pupil aged 25, weighing 11 st., was parachute-jumping from an aircraft travelling at 80 m.p.h., at a height of 700 feet, into a 10 m.p.h. wind. Unfortunately, although the parachute came out of its pack, the canopy did not develop properly, with the result that the pupil landed some 10 seconds later on a ploughed field, dropping at a speed which must have been in the region of 50 m.p.h. When examined a few seconds later he was found to be still alive and just conscious. He was lying on his left side in a crouched position, with his knees drawn up towards his chin. The pulse rate was 70 a minute and weak; breathing was shallow and difficult owing to much mucus being brought up, and there was a small amount of thin yellowish fluid exuding from his right ear. Physical examination showed no obvious signs of fracture or paralysis. The pupils were equal and of normal size.

A " tubunic " ampoule (morphine hydrochloride gr. 1/3, atropine sulphate gr. 1/120) was given, following which he was put on to a stretcher. A few minutes later he became very restless, and as he was now trying to move his arms and legs he had to be strapped securely to the stretcher during transit to hospital. Next day he looked very ill, but was cheerful and mentally clear, showing no signs of disorientation or amnesia. He could move his arms and legs without difficulty and his excretory functions were normal. Two days later the improvement was so marked that he was considered fit for *x*-raying, when it was discovered that he had a compression fracture of the 12th thoracic vertebra. After immobilization in a plaster cast progress was satisfactory and uninterrupted.

Commentary

Partial failure of a parachute is extremely rare and is almost as unique as this man's survival of the accident, which was undoubtedly an extraordinary escape, especially in view of the fact that all previous occurrences of this nature had resulted in instantaneous death either from multiple injuries or from fractured cervical vertebrae.

Reliable eye-witnesses of this descent were of the opinion that the degree of inflation of this soldier's parachute was so slight and his fall so rapid that he could not possibly escape death. It is thought that he landed on one foot and fell sideways, thus preventing the full force of his landing being transmitted through the legs and spine to the base of the skull,

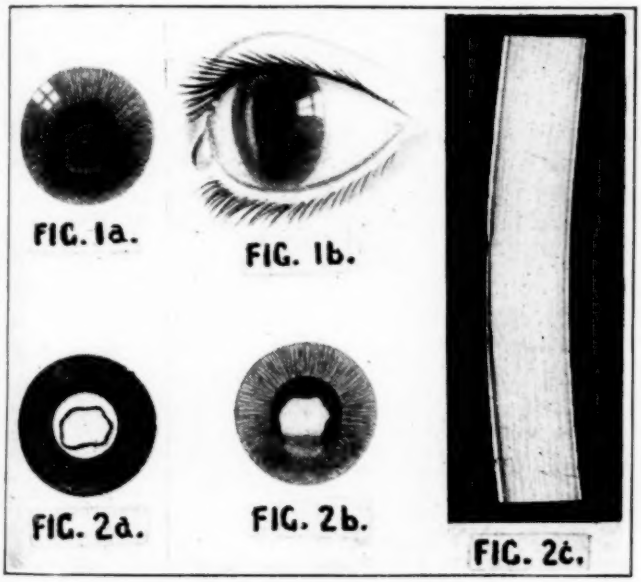
which would have resulted in a fracture in one or more of these places as in the other cases.

We desire to thank Squad. Ldr. J. D. Milne, R.A.F., and Major R. B. Davies, I.M.S., for permission to publish this case report, and would like to emphasize the co-operation between all the medical services concerned.

F. G. NEILD,
Capt., R.A.M.C.
C. M. MACKENZIE,
Flight Lieut., R.A.F.V.R.

Unusual Burn of Cornea from Molten Wax

Dr. H. Sewell Sims, of Palmer's Green, asked me to see a female patient whom he had attended the previous day. She complained of loss of sight after flicking out a lighted wax taper with which she had lit a gas stove, when she said some wax flew between the eyelids. There was no reaction to this foreign body, and the appearance of the cornea was quite normal till, on examination through a loupe, a perfectly transparent layer of wax was seen covering two-thirds of the cornea, which looked as if it had a contact lens lying on it. Until this was removed the cornea did not stain with fluorescein; afterwards approximately two-thirds stained, but the erosion was quite superficial. The wax was removed with a blunt instrument under cocaine, when the vision at once improved from one-tenth to one-third of full vision. Atropine and castor oil were instilled and the eye bandaged. The effects of the cocaine passing off, the eye wept profusely and was very painful. With the ophthalmoscope there was seen a fine line on the cornea, which marked the limit of where the wax had



rested. In spite of the extent of the lesion it had no depth, only the epithelium being affected. It is quite feasible that it acted as molten metals often do—forming a cast of the front of the eye, with a fine layer of protective vapour between. Usually, of course, the lids close so quickly that the cornea escapes injury.

Considering the risks that housewives run several times daily, it really is remarkable that injuries of a similar nature from splashes of boiling fat are not more common. Würdemann (1932) mentions boiling soap, fat, or lard as being possible causes of burns. Sir Stewart Duke-Elder (1938) makes no mention of this in his *Textbook of Ophthalmology*, though there is a diagram of a case of Mr. Doggart's which rather resembles this class of burn—a case of keratoconjunctivitis due to mustard gas. Haab (1909) has a plate in his Hand-Atlas showing a lime-burn of the cornea, which is more or less the same in appearance. Fuchs (1933) does not mention it.

Figs. 1a and 1b show the appearance after removal of the wax, Fig. 2a the line of demarcation, which, however, had entirely disappeared three days afterwards, when the eye was quiet and the vision normal again. Figs. 2b and 2c show the area stained by fluorescein. On the third day there was no staining, and the lesion had healed.

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Late Refractionist, Royal Hospital, Richmond.

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Reviews

FRACTURES

Pictorial Handbook of Fracture Treatment. By Edward L. Compere, M.D., F.A.C.S., and Sam W. Banks, M.D. (Pp. 351; illustrated. 27s.) Chicago: The Year Book Publishers; London: H. K. Lewis and Co. 1943.

Fractures. By Paul B. Magnuson, M.D., F.A.C.S. Fourth edition, revised. (Pp. 511; illustrated. 30s.) London: J. B. Lippincott Company. 1943.

It is noticeable that the large number of textbooks on fractures which have appeared within recent years coincides with improvement in the results of treatment which has come about following segregation under specially trained staffs. Not all fractures, however, can be dealt with in special units, and it is necessary for both general surgeons and practitioners to be familiar with the most effective methods of reduction, fixation, and after-treatment. The scope for textbooks of fracture treatment is therefore wider than ever. The *Pictorial Handbook of Fracture Treatment* needs no apologia such as we find in the preface. It is an excellent little manual and the pictorial part is particularly good—e.g., Fig. 130, p. 265, illustrates the method of production as well as the stages of treatment of "bumper" fractures; while Fig. 151, p. 295, depicts the way in which Colles's fracture and fractures of the os calcis and lumbo-dorsal part of the spine are produced. Fig. 163, p. 313, claims to depict Böhler's method of reducing a flexion compression fracture in the dorsal spine, but the credit for this method of treatment should, we believe, be given to Watson-Jones of Liverpool, and it is not usually desirable to anaesthetize the patient. Fractures of the patella are well done—it is pleasing to notice that the author does not support a recent radical and quite unjustifiable tendency to excise the simple transverse variety. Fractures of the skull may be thought to be rather briefly dealt with, but these fractures usually constitute a minor part of head injuries calling for treatment, and the surgical treatment—as opposed to first-aid treatment—of skull fractures may reasonably be considered to be beyond the ambit of this book. The book can confidently be recommended as a modern and well-illustrated outline of fracture treatment.

Like most new and the recent editions of older textbooks of surgery which have appeared in the last few years the fourth and latest edition of Magnuson's *Fractures* shows the influence of the war, and efforts have been made by the author to render the book more useful to surgeons in the Services. It is not surprising, therefore, that the principal additions deal with transportation and the early treatment of compound fractures. Written clearly in rather dogmatic style and well illustrated by line drawings and *x*-ray photographs this textbook is a straightforward guide which should be particularly helpful to medical students, practitioners, young surgeons generally, and Service medical officers. The line drawings, of which there is an abundance, appealed to us especially, as they indicate very clearly the steps in treatment of particular fractures—e.g., the method of reducing supracondylar fracture of the humerus (Fig. 5, p. 101)—a series of drawings showing the manipulations necessary and the reason for them. We are glad to find that the term "Pott's fracture" is still used despite a recent tendency noticed in some quarters to discard it. We disagree with the statement (p. 429) that "every patient with a skull injury accompanied by coma should be kept flat in bed at all times for a minimum period of two weeks." Nursing these patients with the head raised lowers intracranial venous congestion and has proved more effective; but in general the sections on skull fractures and their complications and those on fractures of the spine are as well done as the remainder and bulk of the book. Of the recently published books on fractures—of which there has been almost a spate—this is certainly one of the best.

FOOD POISONING

Food Poisoning: Its Nature, History and Causation: Measures for its Prevention and Control. By Elliot B. Dewberry. Foreword by Gerald R. Leighton, M.D. In three parts; with appendices. (Pp. 186; illustrated. 15s.) London: Leonard Hill, Ltd. 1943.

Food poisoning is a complicated and extensive subject, but within 180 pages the author has covered its main features. The book is severely handicapped by being a compilation from other sources and not by an author who has himself investigated

the various problems involved. In many cases the original papers have not been consulted, while the views quoted may require modification, even by their authors, in the light of new experience.

The book is clearly written and arranged, while the numerous photographs of the chief workers in this field add to the interest. On the whole it has a high degree of accuracy, and its chief defect is some inequality of treatment. Botulism is given a very extended description, but, in particular, the author fails to realize the importance of staphylococcus food poisoning, and his description—confined to some three pages—is entirely inadequate and gives very little information. He also fails to draw the fairly sharp distinction which occurs in practice between outbreaks due to the ingestion of living bacteria and those in which the symptoms are of the toxin type. The distribution of Salmonella organisms in the animal kingdom is dealt with, but a great deal of importance is omitted, although this is of very great significance in connexion with the causation of food poisoning. The same importance attaches to the distribution in Nature of the various strains of Salmonella and the distinctions between the types, and very little information is given on this head.

In addition to bacterial food poisoning, chapters are devoted to contamination of food by poisonous metals, poisonous plants, poisonous fish and shellfish, and food allergy. In an appendix is reproduced the Ministry of Health's memorandum on steps to be taken by the M.O.H. when food poisoning occurs, with the Ministry's note on the identification of Salmonella types.

While the book can be read with profit and pleasure as a useful and generally reliable guide, it does not give a complete picture of the true incidence and relationship of the various organisms which can cause food poisoning.

A MEDICAL BIBLIOGRAPHY

A Medical Bibliography. A Check-list of Texts Illustrating the History of the Medical Sciences. Originally compiled by the late Fielding H. Garrison, M.D., and now revised, with additions and annotations, by Leslie T. Morton. (Pp. 412. £2 10s.) London: Grafton and Co. 1943.

Mr. Leslie T. Morton, librarian at St. Thomas's Hospital Medical School, has done signal service for all who use medical books by bringing up to date in an independent volume Garrison's remarkable list of historical texts. Thirty years ago the late Dr. Fielding Garrison compiled this list as "a convenient scaffolding" for his now famous *History of Medicine*. But with characteristic modesty he included it in the *Index-Catalogue of the Surgeon-General's Library*, of which he was an official. It has been an unfailing resource to those lucky enough to know it, and it gained slightly wider publicity when he revised it for the *Johns Hopkins Bulletin of the History of Medicine* in 1933. Even so it bore the signs of his wayward genius, and Mr. Morton's edition is a marked improvement in convenience. Garrison's introduction, a thumbnail sketch of his purpose such as only he could write, is missing, but the new features repay this loss. First, Mr. Morton's revision has logical classification and sound indexes, so that the inquirer is not mystified and delayed as he was by Garrison's arrangement. The specialist will find under his subject a neat chronologic purview of the outstanding contributions, both books and journal articles. Thus reports on penicillin and sulphamezathine stand at the end of a pedigree deriving from Theophrastus; while Roentgen's paper "On a New Kind of Rays" heads sixteen items on diagnostic roentgenology. Garrison's section of "Original Accounts of Important Operations" was interesting, but each item from it is now properly under its special subject. Then Mr. Morton has added notes to the majority of his entries, much increasing the usefulness of the list. And he has sifted Garrison's compilation and added perhaps a quarter of the 5,500 items, not merely modern references but also filling gaps in the historical material.

Notes on Books

Dr. HOWARD CHARLES BALLENGER'S *Manual of Otology, Rhinology and Laryngology* was based on the well-established textbook originally written by the late Dr. Lincoln Ballenger. It was intended for students and for those practitioners who need a general survey of the subject. In preparing a second edition for the press (Henry Kimpton; 21s.) Dr. Howard Ballenger has carried out a good deal of revision, making some changes in arrangement and many additions and amplifications of the text to bring it into line with present-day knowledge and practice. The chapter on paralysis and neuroses of the larynx has been revised and partly rewritten by Dr. John J. Ballenger. A new chapter, on foreign bodies in the air passages and tracheotomy, describes the technique for tracheotomy, because this is often an emergency measure and as such may be included in undergraduate teaching and in a text for the general practitioner.

The British Association in 1942 formed a committee for the consideration of scientific research on human institutions, with the following terms of reference: "To consider how the results of scientific research on human institutions and human needs and their interrelations can best be co-ordinated and brought to bear on the formation of public policy." The committee's report appeared in the August number of *The Advancement of Science* and is now obtainable as a pamphlet (6d., or with postage 7d.) from the British Association for the Advancement of Science, Burlington House, London, W.1. The main conclusion is that there is urgent need for the setting up of a British Council for the Social Sciences, independent of the Government, with a permanent secretary.

The *Handbook of Tuberculosis Schemes* in Great Britain and Ireland, 1943 edition, containing up-to-date particulars of tuberculosis dispensaries, medical officers, institutional accommodation, and other details of the tuberculosis schemes of counties and county boroughs, is now available. A list of branches of the National Association for the Prevention of Tuberculosis is also given. Copies may be obtained from the Secretary-General, N.A.P.T., Tavistock House North, Tavistock Square, London, W.C.1, price 5s., post free.

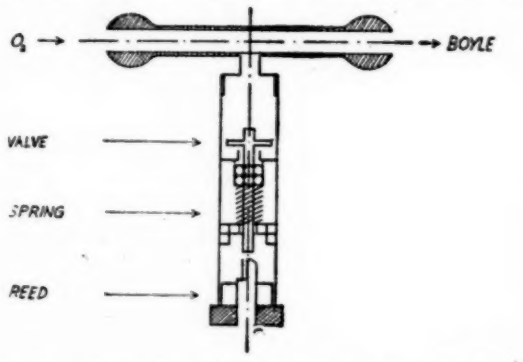
Preparations and Appliances

AUDIBLE WARNING OF EMPTY OXYGEN CYLINDERS

Dr. MASSEY DAWKINS writes:

Modern anaesthetic apparatus is very nearly foolproof, but there remains the ever-present danger of failure of the oxygen supply. This is particularly the case when working in a darkened theatre, owing to the difficulty of observing the flowmeter. To overcome this a simple piece of apparatus has been devised which gives out a loud warning note when the cylinder is almost empty.

The device consists of a compact unit which can be introduced into the gas tubing conveying oxygen from the cylinder regulators to the flowmeter on a Boyle's anaesthetic apparatus. The attachment is effected by dividing the single common tube which connects both regulators to the flowmeter, and joining the cut ends by the connecting tube of the warning unit. The shut-off pressure of the regulators is usually in the region of



5 lb. per sq. inch, and at this pressure a valve which permits the oxygen to pass through the warning reed remains closed, preventing loss of oxygen, while the supply to the flowmeter is satisfactory. When the pressure falls to a low volume, a spring forces the valve seat off a nipple and the oxygen passes through the reed, causing an audible warning note which indicates the imminent need to change to a fresh cylinder. Then tension of the spring is adjustable to allow the device to operate at any suitable pressure.

The unit works very well in practice and gives a great feeling of safety. It can, of course, be used for nitrous oxide, cyclopropane, etc. The experimental work and the construction of the original model were carried out by Mr. P. A. Toller, L.D.S., of the Royal Dental Hospital, to whom I am greatly indebted. The finished instrument was made for me by Medical and Industrial Equipment, Ltd., of 12, New Cavendish Street, W.1. Thanks are due to Mr. E. Pories for the drawing.

BRITISH MEDICAL JOURNAL
LONDON
SATURDAY OCTOBER 30 1943

MISREPRESENTATION

Some people appeared to expect that the Annual Representative Meeting last month would be a stormy one, and that, faced with the threat of a whole-time salaried State Medical Service, representatives from different parts of the country would so far forget the patient as to put the doctor first in their discussions. But the meeting, handled with admirable tact by its Chairman, Dr. Peter Macdonald, showed very plainly that it did not come to discuss matters of the highest importance to medicine in a spirit of narrow partisanship. No doubt Dr. G. C. Anderson's address, "Evolution, not Revolution," printed in the *Supplement* of Sept. 4, page 29, had had a sobering effect. The discussions were conducted in a spirit of realism, and with an evident desire among the participants to be constructive in their approach to the problems of medicine in the future. The most noteworthy event of the proceedings was the Presidential speech of Lord Dawson, who put into words of wisdom what are the thoughts and aspirations of that large majority of medical men who see in medicine something more than a means of earning a living.

It was therefore most disturbing to read in the daily and weekly lay press obvious misrepresentations of what had actually been said and resolved. It was clear that propagandists of various views were getting busy and, like some propagandists, were being unscrupulous. The whisper went round, "The B.M.A. is anti-Beveridge"—and in these days it appears that this is the worst one can say of anybody.

So that these misrepresentations may be countered we are printing in this week's *Supplement* a series of statements submitted to, modified and approved by the Representative Body. These give the lie direct to the current accusation that the B.M.A. is "anti-Beveridge." It is as well to recall that Sir William Beveridge said that the problems of organizing a medical service were outside the scope of his report; so he suggested that an investigation should be made into the ways of financing and organizing the medical services. In a leading article earlier this year[1] it was made plain that the B.M.A. offered to co-operate with the Government in achieving the ideal aimed at in Assumption B, but stressed that the report should be acted on as a whole. Not only has the medical profession not set its face against the Beveridge report but it has insisted even more forcibly than many other sections of the community upon the need for securing the individual against the devastating effects on mental and physical health of poverty and of economic insecurity. Perhaps no group of men and women in the community has a more vivid picture than the medical profession of the crippling physical and moral effects of bad housing, insufficient and ill-chosen food, lack of facilities for healthy mental and physical recreation, faulty industrial conditions, and insufficient medical supervision of the man at work and of the conditions under which he works. Knowing all these things, the medical profession has become highly suspicious of what appeared to be an attempt on the part of the Government to change the structure of medicine instead of getting on first with the job of improving the conditions of life and work of the people. Not only that, but there appears to have been little willingness to attend to those parts of the medical structure which in the opinion of doctors are in urgent need of repair. The B.M.A. is not anti-Beveridge. And Beveridge, we might point out, in looking for a definition of the objects of a medical service, adopted the definition in the Draft Interim Report of the Medical Planning Commission—namely, "(*a*) to provide a system of medical service directed towards the achievement of positive health, of the prevention of disease, and of the relief of sickness; (*b*) to render available to every individual all necessary medical services both general and specialized and both domiciliary and institutional."

The majority of doctors are not satisfied with existing medical services, and in fact have expressed their dissatisfaction, and set forth their proposals for reconstruction, now for a number of years. The revised version of the B.M.A.'s scheme for a general medical service for the nation, published in 1938, and the Draft Interim Report of the Medical Planning Commission published in 1942, are witnesses to this. What has been proposed stands there on record. Unfortunately controversy over the Beveridge report—published after the Draft Interim Report of the Planning Commission—has obscured many of the issues; and to some observers not the least part of this obscuration has come from medical men who have seized the opportunity to make these matters an issue of party politics. It seemed, therefore, that an attempt might be made to reach decisions about the future organization of medicine which would be based upon political expediency, and that the really difficult problems of the medical services would not be approached in an atmosphere free from influences which many doctors have come to distrust.

The medical profession is conscious of the need for reform. It has indicated some of the directions in which reform should move. The great majority of the profession believe that experiments should be made before even a working hypothesis is reached. They consider certain matters to be indispensable to the successful treatment of the sick individual. They do not believe that forms of service suitable for the control of environmental medicine and the prosecution of preventive medicine are fitted to individual medicine. They believe that a whole-time salaried State Medical Service would harm the interests of the sick person. They believe, in fact, that the evolution of medical treatment provides the unassailable argument against a whole-time salaried State Medical Service. But this view precludes further developments in the practice of individual medicine. In fact doctors recognize that the whole trend of medical science makes such evolution inevitable. If all these matters are taken into full account in the White Paper soon to be issued, and if the Government is prepared to discuss its proposals with the medical profession in a spirit of true inquiry into the facts and not on the basis of decisions already arrived

1 *British Medical Journal*, Feb. 18, 1943, p. 193.

at, then we feel sure that in the give-and-take of debate medical men will co-operate whole-heartedly in trying to solve the problem of how to maintain and improve the health of the people.

THE RICKETTSIAE

War and famine are usually accompanied by pestilence, and it will be surprising if the latter fails to play a part in the present world tragedy. Apart from influenza, louse-borne typhus fever probably presents the gravest menace; indeed *Rickettsia prowazeki*, its causative organism, has already given indications of its readiness to take a hand in the game. It is of some importance that we should not allow ourselves to be lulled into a false sense of security by our remarkably good health record to date or by the long freedom from epidemic typhus which this country has enjoyed; we may yet have urgent need of all the knowledge about the rickettsiae which research workers have laboriously acquired. The rickettsiae, as is well known, cause many diseases of both man and animals, apart from louse-borne typhus, and many species are simply harmless intestinal parasites of arthropods—e.g., lice, bugs, mites, ticks, and fleas. The trench fever of the last world war was almost certainly a rickettsial disease; so are Q fever of Australia and Rocky Mountain spotted fever; and it is highly probable that rickettsial agents of many endemic fevers in all quarters of the globe remain to be discovered. By far the most important, however, are the typhus group of fevers, and of these louse-borne typhus holds pride of place because it is the only rickettsial disease, except possibly trench fever, which is primarily a disease of man and hence liable to assume epidemic or even pandemic proportions. Other members of the group, transmitted by mites, ticks, and fleas, have animal reservoirs and tend to remain endemic so far as man is concerned, but there is evidence that flea-borne murine typhus, which has occurred within recent years in Great Britain, may mutate to the classical epidemic form provided that opportunities exist for its transmission through lice. The revelations of Kenneth Mellanby[1] concerning the frequency of louse infestations are not without significance in this connexion. It is extremely unlikely that a major epidemic will originate in this country, but conditions in parts of Europe and Asia are becoming ideal for an explosive outbreak, and M. D. Mackenzie[2] holds the view that widespread movements of population, by introducing the disease into a typhus-free region, may be a factor equal in importance to famine and overcrowding.

There is now little doubt that the rickettsiae are living and reproductive micro-organisms. Akin to the bacteria in some respects and to the viruses in others, they constitute a sort of biological connecting group. They are not filterable in the bacteriological sense, and are visible by ordinary microscopy, especially when stained; moreover, the recent application of electron microscopy to the morphological study of several species has revealed an organized structure within a limiting membrane.[3] Like the viruses, however, they have so far eluded all attempts to cultivate them on lifeless media, and some species appear to be obligate intracellular parasites. Fortunately *R. prowazeki* can be grown in the yolk sac of the chick embryo and in the lungs of infected mice, and both these methods of obtaining large quantities have been applied to the production of vaccines. It is too early yet to say whether the immunity they engender affords satisfactory protection against natural infection. So far only Weigl's vaccine, prepared from the intestinal contents of infected lice, has yielded satisfactory evidence of efficacy in the field, and this method presents too many difficulties for large-scale vaccine production. The problem of immunization is one of great urgency, for as yet we possess no chemotherapeutic agent capable of influencing the course of the disease; the sulphonamides are quite useless and may actually be harmful.

As regards diagnosis we are on firmer ground. The curious antigenic relationship which exists between rickettsial species of the typhus group and certain strains of *Proteus* has provided a means of easy and rapid laboratory diagnosis. A sporadic case of typhus fever may be impossible to diagnose on clinical grounds, but the Weil-Felix reaction on a sample of the patient's serum, taken towards the end of the first week of illness, will almost certainly give a definite answer. In view of the exceptional importance of the disease at the present time it is far better that the doctor should submit a score of negative sera for laboratory tests than that he should omit to send a single positive one.

1 *Med. Officer*, 1941, **65**, 39.
2 *Proc. roy. Soc. Med.*, 1941, **35**, 141
3 *J. exp. Med.*, 1943, **77**, 355.

INDUSTRIAL HEALTH IN 1942

The Annual Report of the Chief Inspector of Factories[1] contains its usual review on industrial health. It is made by Dr. E. R. A. Merewether, who has succeeded Dr. J. C. Bridge in the office of senior medical inspector. Dr. Bridge succeeded Sir Thomas Legge in 1927, and under his leadership the number of medical inspectors increased to 13. There is little doubt that the prospective growth of medical supervision in industry will entail further increases of staff. As Dr. Merewether points out, the experience of factory life and knowledge of industrial processes clearly indicate the importance of preventive measures in maintaining industrial health, and the success of the measures now in force is suggested by the fact that the health of industrial workers in general, in spite of their arduous labours, shows little sign of regression. Dr. Merewether inclines to the view that mental fatigue, or more properly staleness, is increasing, though it cannot be traced in sickness records: but on the other hand it is encouraging to note that the incidence of certain specific diseases and poisonings is diminishing. This must be due in part to the growing recognition of the importance of adequate diet and the increased provision of canteens, and another factor is the great increase in the number of works medical officers, who now total about 850, and of hospital-trained nurses, who have risen to about 6,000. One of the most satisfactory improvements relates to dermatitis in filling and explosive factories. A very substantial drop was noted in the number of dermatitis cases due to T.N.T., tetryl, and other explosives, owing to strict supervision of ablutions, the correct application of barrier substances, the gradual elimination of specially susceptible workers, and the mechanization of many processes.

1 Cmd. 6471. H.M. Stationery Office. (9d.)

A novel feature in the report for 1942 relates to the use of radio-active substances, which has so greatly expanded owing to war requirements, chiefly for luminous dials of instruments. Several hundred "luminizers" were examined more than once during the year, but no evidence of a true aplastic anaemia was found. The Factories (Luminizing) Order came into force in May, 1942, and under it various preventive measures, which had for the most part been voluntarily observed for a number of years, became statutory requirements. Furthermore, the hours of work of the luminizers were limited, and workers under the age of 16 were prohibited. Another legal procedure came into force under the Workmen's Compensation Act, 1943, when the provisions of the Act of 1930 relating to workmen suffering from any form of pneumoconiosis were extended so as to include the condition of the lungs known as "dust-reticulation." This condition had been described in detail only a year before in the Medical Research Council report on chronic pulmonary disease in South Wales coal-miners, and its recognition is doubly important as it may result from exposure to the inhalation of dusts other than coal dust. Of the specific diseases and poisonings notified under Section 66 of the Factories Act, lead poisoning in 1942 showed a slight rise on 1941, but the cases of aniline poisoning (mostly due to T.N.T.) decreased from 249 to 204, whilst the cases of toxic jaundice decreased from the 44 (13 fatal) observed in 1941 to 27 (6 fatal). Cases of epitheliomatous ulceration fell from 128 (11 fatal) to 113 (8 fatal), and of chrome ulceration from 103 to 89. The reported cases of gassing showed a slight fall on 1941, the fatal cases being much fewer (25 against 41).

Industrial health is inevitably influenced by hours of employment, and this subject is discussed by Miss F. I. Taylor, a deputy chief inspector. During 1942 the hours worked by young persons were subjected to a detailed inquiry, and to this end inspectors visited all the factories in certain areas in London, Birmingham, Liverpool, Glasgow, and other centres. The average results obtained are more satisfactory than many social workers had supposed, for it appeared that of young persons aged 16 and 17 85% of the males and 89% of the females were working 54 hours a week or less; 56% of the males and 65% of the females were working 50 hours or less; and 48% of the males and 55% of the females were working 48 hours or less. Of the boys and girls aged 14 and 15, 30 and 37% respectively were working 44 hours or less, and the remainder (except for a very small number of illegal cases) for 44 to 48 hours. The inspectors also reported that the tendency during the year was towards a reduction of the hours worked by adult women and men, but no statistics are given.

PHOSPHATIC RENAL CALCULI

The problems presented by phosphatic renal calculi, frequently bilateral, demand the closest co-operation between the biochemist and the clinician. In seeking for the cause of the stones the factors of stasis and infection in the renal pelvis must never be overlooked, however important the underlying metabolic error may be; and when considering their treatment these two factors always need attention, whether or not the metabolism also can be corrected. Since the large branched stones which fill the pelvis and calices are commonly composed of calcium phosphate, often with the admixture of calcium carbonate and ammonium magnesium phosphate, and since they form in alkaline urine, an obvious method of tackling the problem is by dietetic and medicinal measures designed to make the urine acid enough to dissolve the stones. There seems little doubt that the stones vary in their consistency, and the successes reported by this method have probably been obtained when the stones have been comparatively soft and less compact. The harder stones may still remain undissolved, and call for a more direct method of attack. The operation of nephrolithotomy under these conditions is fraught with so many dangers that any alternative must be carefully considered; and the method of dissolving the stones by instilling solutions of *p*H as low as 4.0 into the renal pelvis, as described by Suby and Albright, deserves an extensive trial. In their most recent paper[1] on the subject they quote some cases in which the solution was introduced through a nephrostomy wound, while in others no operation was performed but the renal pelvis was irrigated through a ureteric catheter. By such direct approach, of course, the stones may be continually washed over by fluid which is more acid than the urine can be made by diet or drugs. Their earlier attempts to make a solvent resulted in solutions which, though isotonic, were very irritating to the mucosa of the urinary tract; but the discovery that the addition of magnesium ions reduced this irritation led them to adopt a specially prepared solution containing citric acid, magnesium oxide, and sodium carbonate. Even this fluid damages certain bladders, and therefore they devised and now describe in detail an ingenious arrangement whereby intermittent irrigation of the renal pelvis is combined with continuous drainage of the bladder. As the fluid must be introduced through the ureteric catheter every 5 to 10 minutes for several weeks the treatment demands that a nurse shall be constantly in attendance. Even after dissolution of the stone the problem of recurrence has to be faced, but dietetic and drug treatment may be expected to control the reaction of the urine sufficiently to prevent further stone formation. The authors lay stress upon the value of air pyelography for determining whether a stone is in contact with the renal pelvis. They also quote one case in which their method was only partially successful—an outer layer of phosphate was dissolved, leaving the oxalate core unaltered—in order to point out that such stones, unsuitable for this method of treatment, should be recognizable radiographically.

THE PARENT IN THE DOCK

Juvenile delinquency, having reached really menacing proportions, is beginning to stir a faint alarm even in the British public. We received a very ugly shock at the reports—they could not be silenced because they were so many—which came from every country district about the appallingly neglected state of children evacuated from the towns. It has long been a platitude in child guidance clinics that the real problem of a problem child is the parents. Nevertheless, a pamphlet by Dr. L. G. Housden[2] is probably the first attempt to deal with juvenile delinquencies and other shortcomings from the point of view of the parents, and to assess the extent to which parents are to blame. It is founded on a series of lectures delivered in various parts of England with the object of drawing the attention of the responsible authorities and of the general public to the unnecessarily low standard of child welfare in Great Britain. It is published under the auspices of the National Association of Maternity and Child Welfare Centres and for the Prevention of Infant Mortality. Dr. Housden draws a vivid picture of the "horrible" children of the evacuation, and incidentally of the obscurantist attitude of the authorities. The juvenile delinquents he passes over with bare mention, for he has no need to add anything to our knowledge of that unhappy section. The mismanaged

[1] *New Engl. J. Med.*, 1943, **228**, 1.
[2] *The Parents' Responsibility for their Children.* By Leslie George Housden, M.D. Eyre and Spottiswoode. (3s. 6d.)

child, the victim of the low moral standard of its parents, he studies at greater length, as he does the "ailing children" who are reared on purgatives and quack medicines. The cause of all these ills he regards as our general failure to train parents in child care. This is the cure he advocates, and in doing so he brings much evidence of the success of the attempts that have already been made. He appends a syllabus of courses in mothercraft and homemaking (the current alternative to the term "fathercraft").

"THE OPPONENTS OF THE MEDICAL PROFESSION"

This is the heading to the first page of the first *Bulletin* issued by a body which describes itself as "Medical Policy Association (London)." The secretary of this association is Dr. Basil Steele, and the other active members whose names we know of, as they conjointly signed a letter to the Secretary of the B.M.A. earlier this year, are Mr. A. Rugg-Gunn, Mr. Bryan Monahan, and Dr. Russell V. Steele. The aim of this new body is to oppose the introduction of a State Medical Service—a laudable enough aim. It wants to preserve freedom for doctors as individuals: well and good. But it approaches these objects from a theoretical standpoint that will disturb those who wish well of the medical profession. The present situation of the medical profession, the *Bulletin* says, is "essentially a struggle, linked with a general struggle involving the whole of society." It then takes as its text some observations of a Dr. Tudor Jones. According to Dr. Tudor Jones, "The present century has seen the rise into prominence, despite every effort to maintain secrecy and to preserve the appearance of spontaneity, of a vast chain of interlocked organizations, possibly, and indeed probably, inspired from a common source, which pursue a long-term policy." The *Bulletin* lists as "some agents of the general policy": the Fabian Society, the Labour Party, the London School of Economic and Political Science, Political and Economic Planning (P E P). These are the "opponents." The *Bulletin* says that the London School of Economics teaches "strictly orthodox financial tenets, and produces economists who are subsequently employed by the great financial institutions. This fact is the clearest possible evidence of the nature of the threat to society." It all apparently goes to prove the "closest connexion between high finance and Socialism," and the curious complaint is made that those who control the "central financial institutions" are campaigning "to replace control through finance by control through law." The burden of their complaint soon becomes clear in this statement: "The personnel in ultimate control will of course be those at present in control of international finance—the Warburgs, Schiffs, etc." Hasn't something like this been heard before in the aegophonous tones of a broadcaster from a European station? There is an ominously familiar ring about it. In taking a few potshots at P E P our self-appointed medical pamphleteers go out of their way to refer to the position of Mr. Sieff in Zionism. Then they harp once more on the "central connexions" of these movements—that is, the movements of the "vast chain." The "central connexions" are traced to such people as "the Brothers Warburg, Jews who went from Germany to America," Rothschild, Sassoon, Schuster, Schiff, etc.

Fear that these doctors may be introducing anti-Semitism into propaganda for their "medical policy" unfortunately finds support in a subsequent reference in the same *Bulletin* to those well-known forgeries the "Protocols of the Learned Elders of Zion." "There is no doubt that they [the Protocols] are *effective* plans (i.e., for the complete domination of the world), written with deep understanding of human psychology," state these would-be discoverers of a world-wide conspiracy. According to a report in an evening paper of an interview with Dr. Basil Steele, Mr. Rugg-Gunn, and two other unnamed medical men, these men said: "We are not against the Jews. We are against Jewish Fascism—international financial control by the Jews." This savours very much of the use of that abominable propaganda device of anti-Semitism to which we have been the painful witnesses in Germany for the last decade—part of something against which Great Britain has been pitting her whole strength for just over four years. We feel strongly that methods such as these are to be deprecated and must, particularly at the present time, tend to injure the cause of the profession.

MORE BACK NUMBERS WANTED

Ten weeks ago we printed an appeal to members who do not preserve the *Journal* for binding to send their copies (preferably in bulk) to B.M.A. House, Tavistock Square, W.C.1, addressed to the Secretary of the Journal Board, who will repay the cost of carriage. The response to this invitation has not been as large as we hoped for, but some members who intend to act upon it may be waiting until they have accumulated a substantial pile of recent *Journals*. There is a constant demand for back numbers from libraries, medical institutions, and other sources at home and abroad, and each issue goes quickly out of print; hence any spare copies published during the war will be welcome, both for present purposes and to set aside for the reconstruction of medical and scientific libraries in countries now overrun by the enemy. The steady growth in membership of the B.M.A. to a figure well above 44,000 has increased the circulation of the *Journal* by 14% in the past five years, because every new member must have his weekly copy. Since April, 1940, there have been very severe and progressive cuts in the amount of paper allowed to be used for printing. A member who returns his copies at any time after reading them will by so doing put them back into circulation through the Head Office for the benefit of others, including the newly qualified who are joining the Association in large numbers. The help thus given will be much appreciated in these days of increasing difficulty.

THE HALF-YEARLY INDEXES

The usual half-yearly indexes to the *Journal* and to the *Supplement* have been printed. They will, however, not be issued with all copies of the *Journal*, but only to those readers who ask for them. Any member or subscriber who wishes to have one or both of the indexes can obtain what he wants, post free, by sending a postcard notifying his desire to the Accountant, B.M.A. House, Tavistock Square, London, W.C.1. Those wishing to receive the indexes regularly as published should intimate this.

Sir Henry Bashford has been appointed Medical Adviser to the Treasury. We understand that his duties will be to advise all Departments of the Civil Service on the environmental aspects of health, especially the effect of working conditions on health and fitness. Sir Henry's experience at the Post Office will no doubt enable him to extend to the Civil Service generally the admittedly able system of keeping accurate sick records so long employed by the Post Office, which has made it possible to undertake and publish various long-distance and large-scale observations on industrial health. Sir Henry's task will essentially be that of preventive medicine—the task of keeping the worker well and free from sickness. The Civil Service now has its own doctor, and in appointing Sir Henry Bashford the Treasury could not have made a happier choice.

TWO REPORTS FROM THE R.C.P.

The Royal College of Physicians of London publishes to-day two reports by special committees which are to some extent complementary and should be considered together. The Social and Preventive Medicine Committee was appointed on April 30, 1942, and has met on nine occasions. The Committee on Psychological Medicine was appointed on Oct. 29, 1942, to consider and make recommendations on (1) the training of consultants and others specializing in psychiatry or neurology; (2) conditions of recognition as a consultant in this specialty; (3) the undergraduate curriculum on psychological medicine and related subjects; (4) the future development of psychological medicine. It has met on seven occasions.

Social and Preventive Medicine

The interim report by the committee on this subject is a document of 32 pages, in which are set out the committee's views on the training of medical students and nurses in social and preventive medicine. It also suggests some of the ways in which an appreciation of the conception inherent in that term could improve the services of the medical profession to the community. The changes suggested are in no sense revolutionary; they represent merely a natural growth resulting in a change of emphasis from curative to preventive. To attain the aims outlined in this report the committee makes the following recommendations:

(i) That every medical school should establish a Department of Social and Preventive Medicine, the size and scope of the department depending upon the facilities and personnel available.

(ii) That this department should organize a modernized course in social and preventive medicine to replace the present course in public health, which, as in the clinical subjects, should be a curriculum founded securely on the basic sciences, growing and expanding through the three clinical years.

(iii) That as well as theoretical teaching such a curriculum should bring the student into close touch with the active organizations in the community concerned, particularly with social and preventive medicine—namely, the health services provided by the local authorities, and the almoner's department within the hospital.

(iv) That all medical schools should recognize the importance of problems associated with industrial medicine.

(v) That student health services should be available in every medical school, and that under the general direction of the head of the department of social and preventive medicine they should be used as an instrument of teaching.

(vi) That all teaching hospitals should employ properly trained almoners and psychiatric social workers, both in the care of patients and in the teaching of students.

(vii) That the Royal College of Physicians should take an active interest in the organization of the teaching of social and preventive medicine, not only to medical students, but also to nurses and medical social workers.

Undergraduate Education in Psychiatry

The interim report of the Committee on Psychological Medicine deals with the subject of the third term of reference only—viz., the undergraduate curriculum on psychological medicine and related subjects. It is issued at this stage with the qualification that it is proposed to embody it later in the full report, and it may need to be modified in detail in the light of the findings of the committee upon the other terms of reference. The interim report is a document of 12 pages and ends with the following ten recommendations:

1. Every teaching medical school should have a department of psychiatry for both out-patients and in-patients, with an adequate teaching staff.
2. There should be a course of normal psychology towards the end of the second pre-clinical year.
3. At the beginning of the student's first clinical year there should be an introductory course on the psychiatric aspects of clinical work.
4. There should be a systematic course on psychiatry extending throughout the clinical period.
5. Six of the lecture-demonstrations of the systematic course on psychiatry should be devoted to mental deficiency, and at least two should be carried out at an institution devoted to the care of mental defectives.
6. Students should act as clinical clerks in the psychiatric department for three months during the first or second clinical year, and should hold a short resident appointment in a mental hospital or observation ward during the last clinical year.
7. The clinician attached to the department of social and preventive medicine should, as supervisor of social studies, work in co-operation with the psychiatric as with other departments.
8. Teaching hospitals should employ more psychiatric social workers.
9. The student's knowledge of normal psychology should be tested by examination at the end of the pre-clinical period.
10. In the final examination there should be a separate examination in psychiatry which might be taken at the end of the clinical period or at an earlier stage.

Pressure on our limited space permits no more than reproduction of the two committees' recommendations at the present moment.

A SURGEON'S LAST MESSAGE

The following letter, headed "Is there Safety in Numbers?" was written by Sir W. I. DE COURCY WHEELER *for this Journal on Sept. 11, 1943, the day of his death. It was found in his typewriter and is the last thing he wrote.*

SIR,—There is a tendency to-day among some surgeons to claim the right to express dogmatic opinions, and to feel aggrieved if such opinions are criticized, on the grounds that they have dealt with considerable numbers of the cases in question. They claim that they alone are in a position to judge the merits or demerits of the various forms of treatment, and that paucity of material disqualifies all others.

I have been a surgical traveller all my life, and have had priceless opportunities of seeing the great leaders in surgery at work both at home and abroad. The greatest specialists were not those who congregated large numbers of cases of a particular kind under one roof, but those who gave an intense personal study to a few.

Kocher of Berne, as far back as forty years ago, was one of the first Continental surgeons under whom I studied. He worked in a town of 120,000 inhabitants. He was an individualist. Like a painter of portraits he had no place for mass production methods in the realm of surgery. His cases, let us say of fractures, were comparatively few, but each case was treated by himself; possibly each would be seen more than once a day; the slightest deviation from normal alignment was regarded as a crime for which the surgeon was responsible; there was no delegation of duties to others. Kocher's entire time was spent in dealing with a few.

Can there be any question as to which is the greater authority, the surgeon who nominally has under his care a hoard of patients, to each of whom he can personally give but the scantiest attention, or the surgeon who has spent an equal amount of time studying intensively a few? The incentive to obtain results above reproach is greater when a few cases are in question than when large numbers form a queue. In the one case there results the well-finished hand-made article of the craftsman, in the other the less reliable output of mass production.

RESTORING THE INJURED MINER

The Miners' Welfare Commission has issued a useful four-page leaflet entitled "Rehabilitation Treatment for Injured Coal Miners," which actually covers more ground than this title suggests, going back to the time of the injury and explaining how the best medical care can be obtained. The accident rate in mines, it states, is six times as high as it is in factories, and the injuries are often very severe. When an accident occurs the colliery management or the colliery doctor must decide where the injured man should be sent for treatment, and much depends on a wise decision at this stage. Cases of fracture of the arm, spine, or the lower limbs from the pelvis to the foot should be sent immediately after first-aid treatment to a hospital with an orthopaedic or fracture department. These departments have been established in both England and Scotland at selected E.M.S. hospitals, the names of which can be obtained from the local representatives of the Ministry of Fuel and the Miners' Welfare Commission. The leaflet points out that every doctor and colliery ambulance man should know which hospital having such a department serves the area of the colliery. The cost of treatment, whether the fracture occurs during work or not, is borne by the

Ministry of Health or Department of Health for Scotland so far as it is not defrayed by the patients through contributory schemes or otherwise.

Rehabilitation, which is described as "the rounding off of good hospital treatment," can be provided, the leaflet continues, in almost 80% of cases at out-patient departments. For the remaining 20% rehabilitation at a special residential centre is necessary, and two such centres are already functioning well Berry Hill, Mansfield, was taken over by the Miners' Welfare Commission at the beginning of the year, and the centre at the former Gleneagles Hotel was opened last January. Further centres, linked with the fracture service, are being developed by the Miners' Welfare Commission to serve all the major coalfields. There is no charge for treatment at these special centres and patients' travelling expenses are repaid. The centres have no connexion with workmen's compensation and no reports are made for compensation purposes. Patients are recommended for admission by the surgeon responsible for treatment in hospital, or, in old cases, by the panel or colliery doctor, but the surgeon at the centre alone is responsible for deciding whether the patient's injury is suitable for treatment at the centre. The leaflet adds that an important factor aiding the speedy recovery of injured miners is the assurance that they will be re-employed afterwards. As the patient is not discharged until he is fit to start work there should be no interval when he is unemployed. At Mansfield 95% of 400 consecutive patients who had had long periods of total incapacity have been reinstated in industry. For the few who are prevented by some permanent disability from returning to the mining industry training is provided under the Interim Scheme of the Ministry of Labour for the Training and Resettlement of Disabled Persons.

REHABILITATION CENTRE FOR DOCK WORKERS

It has taken an acute shortage of man-power during the war to focus attention on the fact that the restoration to health of the sick and injured dock labourer in an island country is a matter of national concern. The explanation apparently is that hitherto the casual nature of the work has made organized rehabilitation among the men impossible. Now, however, with the registration of all dock workers the follow-up of those who are absent through sickness is made easier, and the authorities for the area of the port of Manchester have taken the next logical step and established a rehabilitation centre at Salford, where dock workers may go for advice and treatment. The centre is in an old mansion—Claremont, Eccles Old Road, Salford—which had been developed as a hostel and welfare centre for transferred dock labourers, and which, with its extensive out-buildings, has been equipped to provide physiotherapy, gymnastic, and social departments. The whole is administered by a committee, upon which, among others, are Dr. A. E. Quine and Dr. J. M Ross, representing the Ministry of Health, and Dr. Joan Harwood of the factory inspectorate. The medical officer in executive charge of the centre is Dr. J. P. Broom, who was appointed last year and who has been supervising the lay-out and equipment and making himself familiar with the technique used in other rehabilitation centres throughout the country. He will have the help of a welfare officer of the Ministry of Labour, and the individual records of the men on the dockers' register and other facilities will enable him to get into touch with those to whom the centre may be of service. While Dr. Broom will advise the injured man on the special treatment suitable to his particular needs, he will do so without interfering in any way with the existing relationship between the man and his own doctor. The advice and treatment will help in large measure to check the tendency to return to work too early, but a much more telling factor will be the subsistence allowances that are to be made while earning capacity is reduced. These allowances amount to as much as 55s. a week (less sick benefit, pensions, etc.) in the case of the totally unfit worker, while there are suitable payments for the partially fit, who attend at the centre on certain days or for part of a week only. In addition, a midday meal is to be provided free of charge for those attending all day, and travelling expenses are to be refunded. Care is to be taken to see whether the dock worker is able to resume his former occupation or whether a transfer to a different type of work would be more beneficial. The centre is already in operation, and should be able to deal with 50 patients when it is fully functioning.

The increase in the number of women doctors in Germany in 1943 (*Koeln. Ztg.*, May 7, 1943) amounts to about 40% compared with 1939. This corresponds to the increase between 1937 and 1939. In the next two years still greater increase is expected. At present there are 9,426 women doctors in Germany in a total of 73,960 doctors. Of these women, 5,146 are in salaried employment, 2,210 have taken practices, and 2,070 are not employed in any medical activity: 74.7% of them are married and 47.1% of them are married to doctors. With the incorporation of the Ostmark, the Sudeten territory, and the Ostgebiete, 1,200 women doctors were brought into the Reich.

Reports of Societies

THE CRIMINAL, THE PSYCHIATRIST, AND THE STATE

The presidential address to the Section of Psychiatry of the Royal Society of Medicine was delivered on Oct. 12 by Dr. W. NORWOOD EAST, formerly H.M. Commissioner of Prisons, who discussed the subject of psychiatry in relation to the criminal.

Although there was no justification, he said, for the belief that crime *per se* was an indication of mental disorder, repeated criminal behaviour by the same offender might be the result of mental abnormality. The Home Office classification divided crimes into six main groups, which were not mutually exclusive: offences against the person, offences against property with and without violence, malicious damage, forgery, offences against currency, and other offences; but this classification lacked significance for the psychiatrist because legal and official approaches differed from scientific approach. The legal interest in a killing, for example, might depend upon the differentiation of murder from manslaughter, while the medical interest was chiefly concerned with the personality of the offender. For medical purposes crimes could be classified into acquisitive, aggressive, sexual, gregarious, and the like, according to the instinct involved. These classes overlapped and were incompletely differentiated The crime of "breaking and entering" might relate to the acquisitive, the aggressive, or the sexual group. Some cases of murder, assault, burglary, theft, or arson were primarily sexual offences, and only incidentally associated with the aggressive or acquisitive instinct.

After some comments and quotations on the relations of the State to the scientist Dr. EAST said that, although doctors might be less effective than legislators in the prevention of crime and the treatment of criminals, it was right to recognize that doctors were concerned with individuals rather than with groups, and that offenders who came under their special care were usually the most difficult and the least responsive. There was no escaping the fact that opinions were occasionally peddled in public—in courts of law—to the real detriment of criminology and psychiatry. Some psychologists who had no medical qualifications and no training in psychiatry were too ready to make a diagnosis concerning the mental condition of the persons they examined. He had had for over forty years exceptional opportunities of studying at close hand the evidence given in criminal courts concerning the mental condition of accused persons, and it was not always satisfactory. He referred to this because the number of non-medical psychologists seemed likely to increase, and their divergent views were likely to confuse juries.

Dr. East believed that in the future evidence concerning the mental condition of accused persons and the manner of their psychological functioning should be accepted only from experts who were registered medical practitioners, and that medical men who had no special qualifications as psychiatrists, however eminent they might be in other branches of medicine, should steadfastly refuse to be drawn into expressing opinions in the witness box concerning the difficult matters which might arise in the association of mental disease and crime.

Functions of Jury and Psychiatrist

The protection of society from the criminal and of the criminal from society concerned both the State and the psychiatrist. The latter was sometimes not free from bias in favour of the criminal; this was almost inevitable, seeing that the training of the physician led him to put the interest of his patient before other considerations. But in a criminal case the wider interests of society must not be impoverished in favour of the offender. Any such attempt would eventually injure him as well as the society in which he lived. On the other hand, it was very important that the independence of the psychiatrist should be maintained; his researches and opinions must not become subservient to the political fashion of the moment. Dr. East believed it to be a thoroughly mischievous suggestion that the mental condition of an accused person should be taken out of the hands of the jury, and that a medical referee sitting with the presiding judge should

determine the issue. If the results of a psychiatric examination were to be informed and purposive the accused must feel that the medical examiner was able to extend to him a hand of human sympathy and understanding. If the medical referee had merely to assess the value of the documentary evidence and the opinions of the expert witnesses without himself making a personal examination of the offender, he would often find himself uncertain and dissatisfied and sometimes wrong. But it was quite impossible to carry out a psychiatric examination satisfactorily in court; it required the most favourable conditions available, and immediate contact with the accused. Less objection would seem to apply to a procedure which restricted the duty of the jury to finding the prisoner guilty or not guilty of the crime, leaving the question of insanity and irresponsibility to a medical tribunal before the court determined the sentence.

But nowhere did there seem to be any willingness to transfer the functions of the court and jury to the psychiatrists, and he did not believe that the psychiatrists wished this duty to be imposed upon them. Their training and experience were not necessarily the best to apply to wider issues, and they might be able as psychiatrists to carry a case only partially forward to the final conclusion. Different interpretations of the significance of the same set of facts might be made by warring expert witnesses, and an intolerable burden would be placed upon psychiatry in its adolescence if it had the last word in a criminal court. For example, a sexual perversion might be the result of a constitutional anomaly, but was the psychiatrist the person to decide whether its overt expression should be more tolerated than that of sexual offences which were not due to perversion and which might be more urgent than the less forceful drives of many perverts?

Criminal responsibility was a legal concept which the public understood and of which it approved, and so far psychiatry had not replaced it by anything more precise or practical. Criminal responsibility and the culpability recognized by medical men should be regarded as two different things. If the former were left to the lawyers there would be more time to study closely the medical conception of culpability, for this was likely to become increasingly important with the crystallization of knowledge concerning minor mental abnormalities.

Psychological Treatment of Crime

The psychological treatment of crime was so recent that its scope was still uncertain. It was not to be recommended lightly or without discrimination, and it might be expected for some time to come that unsuitable cases would be suggested for treatment as well as suitable ones. The study of minor mental disorders, as well as the introduction of new methods of treatment, had opened up new possibilities in the scientific attack on crime. But a psychological investigation, while it might explain conduct, did not necessarily excuse it. There was a growing tendency in the courts to consider the criminal more than the crime, but the welfare of the criminal must often be subordinated to the wider interests of society. Imprisonment might be necessary for public reasons in spite of the fact that non-custodial measures had been recommended by the psychiatrist. Conversely, detention over a prolonged period, with or without special psychiatric and rehabilitative treatment, might be desirable from the medical aspect but not justified by the nature and circumstances of the crime.

Perhaps the most outstanding feature of the association of the modern psychiatrist and the criminal was the recognition of the importance of the emotional genesis of crime. The study of sexual crime, in particular, had contributed much in recent years to a better understanding of instinctive action when directed towards criminal purposes.

After discussing some of the proposals put forward in the Criminal Justice Bill, 1938, which was being considered at the outbreak of war, and the intention of which was to grapple still more closely, individually, and efficiently with the ever-present dilemma of penal reform, Dr. East concluded with the remark that in his judgment some of the intricate problems involved in the scientific approach to crime and the scientific treatment of mentally abnormal criminals belonged to the borderland between mental disease and anomalies of character rather than to the territory dividing mental health from mental illness. However this might be, the psychiatrist's part must be carried out in the spirit of the scientist who was able to take the long view, willing to serve both State and lawbreaker, and, in spite of disappointments and rebuffs, a firm believer in man's usefulness to man.

A hearty vote of thanks was accorded to Dr. East on the proposition of Dr. Hubert J. Norman, seconded by Dr. J. Brander.

Correspondence

Old Lamps for New

Sir,—In a recent article in the *Guy's Hospital Gazette* Brig. W. H. Ogilvie, in speaking of wounds in the East African campaign, makes the following statement: "Drainage should be by gauze impregnated with some oily medium. Vaseline has proved its worth in many fields and in thousands of cases." Here we have a return, literally, to one of the household remedies of our grandmothers for the wounds of the greatest war in history.

Again, in your issue of March 20 last and in your leading article "Rehabilitation of the Flavines" you merely state what many of us—simple souls, no doubt—have found by experience during the last 20 years to be the best antiseptic for routine use in general practice. Does it not seem a matter for regret that while so much lip service is paid to the general practitioner, and his potential value in clinical research emphasized, his views are never really canvassed on any medical subject?—and herein lies the weakness of much medical research.

The present tendency towards extreme simplicity in the treatment of burns—reliance being placed chiefly on sulphanilamide in petroleum jelly or on sterile petroleum jelly alone—only tends to support the use for many years of acriflavine emulsion with its conspicuously successful results, though this preparation is belittled in your article. Such disparagement, no doubt, is comparable with the successful clinical use of strychnine in cardiac cases and lotio plumbi cum opio as an anodyne, though both have been condemned experimentally as of very little use. We thus see in the course of four years a complete swing over in the treatment of burns, from an attempt to convert a case of burns into the commonly accepted picture of an Ancient Briton to a few simple dressings of petroleum jelly.

What, then, is wrong with medical research that it has (in spite of some great forward moves) to scrap so much that has at one time seemed almost fundamental in therapeutics—e.g., tannic acid and the aniline dyes in the treatment of burns? Some problems are befogged by over-simplification, others by over-elaboration. Medical research seems to be hindered by the latter. Masses of facts are collected and presented in columns and tables at different times. Does anyone ever attempt to correlate all these hieroglyphics which are served up to us, or do they merely remain as disjointed monuments to the industry of the collectors? There seems to be an incurable fondness for this heaping up of Pelion on Ossa and Ossa on Olympus of facts based on experimentation and not on clinical observation of the human being. A few years before his death Lord Moynihan said there was ample *clinical* opportunity for research, though later he seems to have recanted and bowed to orthodox opinion.

These reflections may be mere presumption in a general practitioner and, like the Psalmist, he should perhaps say, "These things are too high for me." But again, like Rosa Dartle, "I merely want to know."—I am, etc.,

Hove. G. L. Davies.

Early Recognition of Cancer

Sir,—Your correspondent Dr. Joseph Walter (Oct. 16, p. 493) states that the new Cancer Act will mean a great step forward in the treatment of cancer, and he urges that talks on the wireless and at the pictures and by lectures, advertisements in the Press and, presumably, on all the hoardings and public buildings, the distribution of popular booklets on the earliest recognizable symptoms of cancer in various organs will assist in the earlier recognition of the malady. How much of this is true?

I cannot help but feel that in those sites where the lesion is capable of early detection the patient suspects the nature, and because of a knowledge of the outcome of similar lesions in his friends tried to escape by secreting the evidence, hoping against hope that the suspicions will prove to be unfounded. I do not believe that the average person is so stupid as to ignore such lesions, for medical men and members of their families do not appear to come forward any more quickly than laymen; in fact the former frequently come for examination in the first instance because of the insistence of the non-medical relation. Your correspondent says pessimism about cancer is out of date. Was pessimism with a patient, whatever the condition, ever in date? The cancer expert who says to the patient: "You know what is the matter with you, missus; you've got a cancer," is not out of date but, so long as he cannot provide a certain cure, is inexcusably brutal.

The personal experiences given in your columns in the letters of William Gorse and Percy Furnival must have left some impressions: the latter "formed the opinion that the treatment he had undergone had increased his sufferings and made his passage more difficult, and he wished in his love for humanity to save others from a like fate." All of the cancer clinics could provide similar cases. So much for the cancer which can be recognized in its early stages. There are others which the patient suspects and the most exhaustive investigation fails to discover, even after the development of obvious secondary metastases. In some cases recognition of the primary is impossible at the post-mortem examination.

In the period of 1931 Paris and its environs was disfigured by huge posters about cancer, and at that time their Radium Institute was a model possessing the most up-to-date scientific equipment for cancer research. Has the incidence or mortality of cancer been reduced in that city or in the cities of this country where for years cancer teams have been energetically working? I can see no difference in the cancer rates in this country between those cities with the clinics and those without, and therefore I can see no reason to multiply such clinics if they are merely to repeat the work which has really not brought us any nearer to the solution of the problem. In such clinics there is a tendency in treatment to neglect the patient, not only in the clinical examination but in the response to treatment, and to rely on investigations in ancillary departments and data provided by the physicist. No matter how accurate the latter, the very variable factor of the patient cannot be estimated; for some years treatment was based on a fictitious "lethal carcinoma dose" of radiation because the patient factor was overlooked. With regard to the former, I wonder, for instance, how often is there failure to carry out a digital examination of the rectum where a radiological investigation is readily available. I have known the former to be neglected when the patient has complained of bleeding, pain, and a feeling of fullness in the rectum, when a secondary has been found and recognized histologically, and when laparotomy and hysterectomy have failed to reveal the primary, which was within 2 in. of the anus. On the other hand, there is the question of the cancer expert and his ability to appreciate early signs. I have known definite radiographic signs to be neglected for months until clinical signs were recognizable.

Would it not be better to have two or three institutes investigating different aspects of the problem rather than multiple duplications of the present activities, and, in particular, a more careful investigation of the factors which bring cure to the small proportion rather than a prolongation of an existence to a larger number? The best and most attractive advertisement for cancer patients will be the announcement of a certain cure. I believe they know the early signs as well as we do and will not wish to have the bogy intruded before their minds when they seek recreation.—I am, etc.,

Birmingham. JAMES F. BRAILSFORD.

Statistics of Neurotic States

SIR,—I was interested in Dr. Howard Collier's article (Oct. 9, p. 461) on the statistics of neurotic states in cases sent to medical referees. Some of his figures, however, require considerable study. He begins by explaining that a total of 2,000 cases were examined for the study, yet only 1,693 cases appear in the statistical table. It is not clearly explained where the discrepancy arose. In the interpretations of the results two statements are open to criticism. The conclusion that about 280 per 1,000 of all cases of unduly prolonged disablement are due to or associated with manifest nervous or psychiatric disease is acceptable, but if that is the case, it is not true that 280 in every 1,000 disabled persons are likely to experience an unduly prolonged disablement by reason of "nervous disorders." According to the figures, there were out of the 200,000 people at risk about 66,000 claiming benefit each year —1 in 3. With an estimated total of 770 to 1,540 neurotic cases showing prolonged disablement, this obviously gives a rate of well under 280 in every 1,000—only 12 to 24 per 1,000, in fact.

Lower in the article a correct rate of 3.8 is calculated representing the number of cases per 1,000 showing prolonged disablement due to neurosis during the year 1940. Strangely enough this rate is stated without any time limit, implying that it is the number showing neurosis at any time. That this is a real error of judgment is shown by the next statement, that since 1 in 3 persons claims benefit each year the rate per year is 1.2 per 1,000. This argument will not bear scrutiny, and the statement is meaningless, since the yearly rate has already been calculated, being a minimum of 3.8 per 1,000. The rate of cases at any time, implied in the rate of 1.5 per 1,000 requiring "expert psychiatric help," cannot be calculated without knowing the average duration of a psychiatric case, a subject worthy of considerable discussion. The figures produced are estimated totals for a quite arbitrary period of one year (1940).

Since this statistical method may well prove in post-war years to be a valuable method of acquiring information and one in which the average doctor may have to interest himself willy-nilly, it is of extreme importance that the aims and limitations of such a method should be clearly kept in mind. It would be an additional advantage if statistics could be presented in such a way as to be easily followed by an ordinary person like myself. Even at the expense of over-caution and over-simplification, it may be worth while trying to avoid the oft-repeated dictum that "statistics can be made to prove anything," a statement which often follows on a statistical survey that is difficult to understand and check.—I am, etc.,

Hamilton. E. A. TURNER.

Mind and Stomach

SIR,—Was it by chance or design that you published in your issue of Oct. 16 Sir Henry Tidy's outstanding communication "Peptic Ulcer and Dyspepsia in the Army" and in your leader dealt with Masserman's recent work on behaviour and neurosis? One cannot help feeling that the increase in dyspepsia, organic and non-organic, among the civilian population during the past two decades, and also increased incidence in the Army during the present war, might be explained by a further study along the lines suggested in Masserman's book. The past twenty years have been years of tension, anxiety, and insecurity, which might well be a disturbing factor "to the total apperceptive field.' It would be interesting to hear the views of the writer of your leader.—I am, etc.,

London, W.1. LEOPOLD MANDEL.

Treatment of Septic Hands and Fingers

SIR,—As one of the many "most junior house-surgeons in sole charge of septic cases," I cannot let Dr. E. C. Atkinson's letter (Oct. 2, p. 432) pass unchallenged. We haven't a trade union to challenge him, although his plea for "standardization by propaganda" might suggest we have. The following remarks are presented in all humility, as an impression—not a statistical survey—after two months' work in a busy casualty department.

"The supervision of the ripening stage" intrigues me. As we see only 5% of septic hands in the stage of invasion ("ripening stage" is rather pickle bottle!), Dr. Atkinson is indeed a lucky man to be able to use such an expression. When seen 95% are either in the stage of localization or in the stage of neglect (my own nomenclature) and require immediate incision. In fact, patients arrive days after they should have come. Two people are to blame for this. First, the patient who "won't give in"; this is particularly common in Service patients on leave. Secondly the doctor who often foments the infection for days (14 days for a pulp infection being the record) and then sends a letter to say

he "considers it now fit for opening and drainage." Yes, one letter said "and drainage"! Also the childlike faith in chemotherapy delays arrival at hospital and the attention of "the most junior house-surgeon."

Let me quote: "I shall be grateful if you will open this man's hand, which has not cleared up in spite of sulphanilamide"—one might add also in spite of inadequate dosage of 2 g. a day (none a night) for four days. This is an opportune moment to remark that, as so many cases are only seen in the stage of localization, Dr. Atkinson's "no doubt in the future penicillin will banish the bogy of the septic finger" seems unduly optimistic. In fact we may surmise that, when the fairy godmother who produced chemotherapy (in spite of which infection occurs!) gives forth penicillin bountifully, septic hands will reach "the most junior house-surgeon" in even greater stages of decay.

Next I should like to assure Dr. Atkinson that incisions are never hurried. Fingers are opened with ring-block anaesthesia. I have done 100 now, of which 40 were infected—e.g., cases of paronychia and pulp space infection. In not one single case has there been any complication whatsoever, despite the frequent criticisms one hears. The remaining infections are opened under gas-and-oxygen in the same leisurely manner. Students work under observation, equally conscious of their responsibility in treating a worker's hand.

Dr. Atkinson continues, "The results of this surgical team work can be seen in large numbers every day in out-patient departments, where the patients attend for hot soaks, probing, and re-incision." Hot soaks are taboo except in the stage of invasion. With an open wound they make the tissues boggy and encourage mixed infection; and it is quite illogical to expect to hasten the process of elimination by washing the surface of a slough with hypertonic saline for half an hour a day. It has not been necessary to use a probe on any occasion. Only two cases have been re-incised. One was a foreigner with a subcuticular whitlow. The patient complained of so much pain that one was fooled into incising as a pulp infection. The other was a paronychia where a fungus infection was missed.

Dr. Atkinson is indeed unfortunate if he sees the cases he mentions "in large numbers." There have been three cases of osteitis. In each case as a result of a pulp infection the diaphysis sloughed. They were seen after 10, 12, and 14 days respectively. Two of these had been poulticed for that time by their doctors.

Despite what Dr. Atkinson says it is not the young generation who make the mistakes in treating hands. It is the older practitioners who are so often guilty of complacency. He will be also startled to learn that students have no idea of the after-treatment of gastrectomies and lobectomies but get several excellent lectures on hands. Old beliefs die hard. Only the other day, on the subject of vaccines for boils on the neck, one of the very aetiological factors was recommended, thus: "Vaccines! No! The best treatment is a damn good bread poultice. That was good enough in my time."

May I conclude with four observations. (1) No doctor should go into general practice without having done a casualty job. (2) Consider the patient as well as his hand. He has to knock off work, he hasn't slept for several nights, and if ever an individual needed encouragement it is the man with the infected hand. The strongest men often arrive on the verge of tears. Incision and medinal provide a good night's sleep which quickly restores confidence. (3) No finger should ever be seen in any position but the position of function. A straight finger should be a crime. (4) Lastly, none should start to treat hands without having absorbed Marc Ibelin's *Surgery of the Hand*.

The worst mistakes are not made by "the most junior house-surgeons," but by the Dr. Blimps—amid shouts of "Arrogant young puppy!"—I am, etc.,

Croydon General Hospital. CHARLES ROMER.

SIR,—Attention is called by Dr. E. C. Atkinson (Oct. 2, p. 432) to the need for official advice to medical men throughout the country on the treatment of injuries and infections of the hands and fingers. Nearly a year ago (Dec. 12, 1942, p. 706) I made a similar plea: I hope Dr. Atkinson's appeal may meet with more response.

I am in entire agreement with all Dr. Atkinson's remarks and suggestions, although I feel that, in view of the importance of the subject, it would be better if the memorandum were drawn up by the Medical Research Council. A few days ago it was announced in the B.B.C. news that during the last year there has been a great increase in industrial accidents. When it is considered that 50% of these accidents involve the hands and fingers, and that the resulting disability is due, more often than not, to maltreatment, the need is clear for an organized endeavour to improve the present deplorable standard of treatment of these lesions.—I am, etc.,

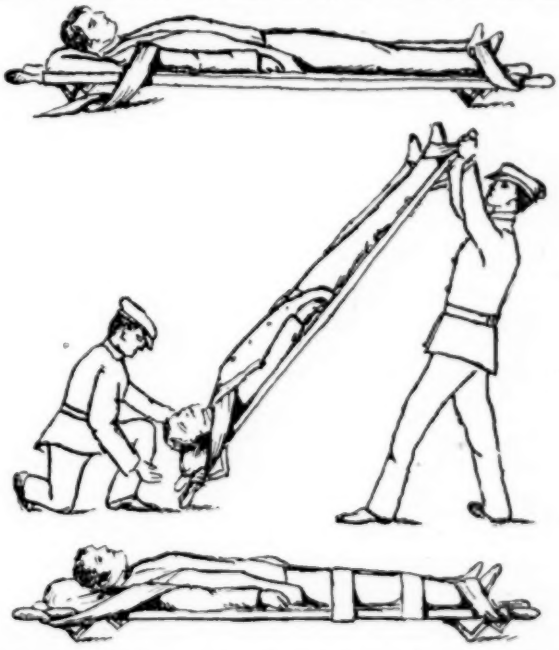
J. B. OLDHAM,
Surg. Commander, R.N.V.R.

Emergency Treatment of Fractured Femur

SIR,—In the *Journal* of Sept. 11 a description is given by Major P. L. Williams, F.R.C.S.Ed., for the emergency treatment of fractured femur with only a stretcher and triangular bandages or straps. During the last war we used the following method with great success:

The patient is laid on the stretcher, a clove hitch is put round the boot of the injured limb and tied firmly to the handle (it is as well to put on two clove hitches as it is most important that this fastening should be firm). Two triangular narrow fold bandages or straps are put under his axillae and made ready to tie to the handles of the stretcher at the head end.

The stretcher is now upended—i.e., the feet are raised right up so that the patient is almost standing on his head; the weight of the body extends the limb fully, the bandages (or straps)



under the axillae are then fastened firmly to the stretcher handles, and the stretcher is lowered. The limbs can now be tied together and a strap or straps put right round the stretcher and limbs. The effect of this is that the limb is fully extended and the ends of the broken bone are separated, the side of the stretcher acts as a splint, and the whole limb is firmly fixed and will stay in position, and the patient can travel in comfort.

The whole operation is extremely simple, can be done in a few minutes, and is very easy to teach. This method can be used for any fracture of the lower limb above the ankle, and if it were generally known would save infinite pain and suffering. I enclose three sketches which illustrate the method.—I am, etc.,

G. D. LAING,
Limpsfield, Surrey. Late Temporary Major, R.A.M.C.

Significance of the Rh Factor

SIR,—It is apparent from several recent articles that the significance of the relationship of the Rh factor in paternal and maternal blood is becoming generally appreciated. The influence of this factor on the health of the offspring of an ill-matched couple is of particular importance. The chances of a child in such a family being born in good health are considered by Race and his co-workers in your issue of Sept. 4, 1943, and the results are not encouraging.

According to the iso-immunization theory (Levine *et al.*) the children of a homozygous Rh-positive father (RhRh) and an Rh-negative mother will almost always show manifestations of

erythroblastosis with the exception of the first and occasionally the second child when the antibodies in the mother do not become sufficiently strong to produce noticeable damage. In the case of a heterozygous father (Rhrh) one might expect a more favourable result, because a proportion of the offspring should be Rh-negative and hence immune. In the aforementioned article this desirable result appears to be rare; thus there was not a single Rh-negative child of a series of forty-four Rh-negative mothers, and, with one exception, no normal child was produced by a mother who had once given birth to an infant showing manifestations of erythroblastosis. In view of these results it may be worth while drawing attention to the following case:

The patient was a woman aged 39, pregnant for the seventh time. There had been no miscarriages and all the children were normal except the fifth, who had died on the fourteenth day, having been jaundiced from shortly after birth. Inquiry from the hospital at which this had occurred showed that this was a true case of icterus gravis, the diagnosis having been confirmed by the blood picture. The mother's blood was examined and found to be Rh-negative and to contain weak antibodies. In spite of this a healthy female child was born after a full-term pregnancy with no evidence of erythroblastosis at birth or thereafter; a specimen of the infant's blood was taken shortly after birth and found to be Rh-negative.

This surprisingly satisfactory result prompted a further investigation, and blood from all available members of the family was examined with the following results: father Rh-positive; mother Rh-negative (with weak Rh antibodies); first and second children normal from birth but not available for examination; third child normal from birth, Rh-positive; fourth child normal from birth, not examined; fifth child presumably Rh-positive, having died of icterus gravis; sixth and seventh children normal from birth and both Rh-negative.

The fact that the third child was normal suggests that she was the first to be Rh-positive, though this is by no means conclusive. The important facts are: (1) that three children were born and remained healthy after the birth of an Rh-positive child to an Rh-negative mother; (2) that two children were healthy and known to be Rh-negative after there had been at least two Rh-positive children in the family, one of whom had died as a result.

In view of the findings of Race and his co-workers such a result would appear to be very unusual; until it is possible for further large-scale investigations to be made we cannot tell whether this was an unusually fortunate result or whether the prognosis suggested by the larger series is unduly gloomy. In the meantime this isolated case may at least be of some encouragement to those faced with the unhappy task of supervising the pregnancy of a woman whose life has already been marred by the occurrence of erythroblastosis in her children.

This case was investigated while under the care of Mr. Carnac Rivett, and I am grateful to him for permission to publish it, and also to Dr. P. L. Mollison, who performed the blood investigations and inspired my interest.—I am, etc.,

A. P. Bentall,
Surgeon Lieutenant, R.N.V.R.

Scope of Prevention in Ophthalmology

Sir,—The very valuable work of Marshall and Seiler on blind certification refers to the West of Scotland, and no comparable survey has been carried out elsewhere in Britain. In her interesting review of the position (Oct. 16, p. 482) Miss Mann does not mention this fact. Similar investigations are required in other areas before any comparisons can be made, the pioneer work of Dr. John Marshall should be used as a model, and we all hope "that a distinct improvement may be manifest" in the future.—I am, etc.,

Tennent Institute of Ophthalmology,
University of Glasgow.
W. J. B. Riddell.

Two Cases Improved by Sulphaguanidine

Sir,—I would like to mention two cases, one of mucous colitis and one of incipient coeliac disease, improved with sulphaguanidine.

Case 1

A woman aged 43 years had a history of mucous colitis since 1937. At times since then her weakness confined her to bed; she had some 30 to 40 bloody mucus stools daily, as many as ten an hour—in fact, what she described as a continuous process. She could not leave her home to go shopping, etc. In Oct., 1942, she was put on 2 g. of sulphaguanidine daily, with a rapid improvement. Her bowels are still (in October, 1943) irritable, some three to four times after she gets up and once or twice at meal-times. Blood and mucus have disappeared from her stools completely. 2 g. sulphaguanidine was kept up for six months; now she says that 1 g. daily keeps her comfortable, and she can get about normally. No laboratory tests have been done in this case.

Case 2

In Sept., 1941, a boy aged 5 years developed alternating attacks of diarrhoea and constipation, with marked wasting and weakness, and "went off his legs." Very protuberant abdomen. Original diagnosis was provisionally tuberculosis, but Dr. Smith, the local tuberculosis officer, could not confirm this. Previously was treated *secundum artem*, according to my book knowledge. This boy had frequent relapses of diarrhoea, and wasting with slight improvement between attacks but with acute constipation. The abdomen remained swelled, and, recently, wasting, diarrhoea, sleeplessness, and abdominal discomfort made the prognosis bad. Six weeks ago he was put on 1½ g. of sulphaguanidine daily, since when there has been a rapid improvement. Appetite has improved; he sleeps naturally all night; his abdominal distension is about one-half. Certainly I am not sure of the diagnosis in this case, but the duration and symptoms point to coeliac disease. I cannot say if the improvement will continue.

No laboratory tests have been done in either of these cases, for the economic reasons discussed at the recent Representative Meeting—neither family can afford them.—I am, etc.,

Crewe. W. L. English.

Stilboestrol for Prostatic Enlargement

Sir,—I accept without question the results claimed by Prof. Dodds and Mr. Kenneth Walker in their treatment of prostatic cancer with stilboestrol, but I must take them seriously to task for a complete misinterpretation of my letter in your issue of Sept. 25. My submission still is that, whatever its success, treatment of enlargement of a male structure, the prostate, with a female sex hormone is an irrational form of treatment, which could be considered rational only if the entire prostate were treated as a rudimentary female structure.—I am, etc.,

Bootle-in-Cumberland. J. A. L. Magee.

Precision Cephalometry and Pelvimetry

Sir,—If, as Dr. E. Millington asserts (Oct. 16, p. 495), there are theoretically exact methods of cephalometry, and if these methods can be applied with confidence in small *x*-ray departments having no whole-time radiologist, then there is no need for a new method. But I must confess to ignorance of any theoretically exact method. Surely it cannot be a lateral tube-shift method, which Dr. Millington in his original letter described as being "liable to a certain degree of error."

The truth as I see it is that no method yet devised is theoretically exact, but that several are sufficiently accurate for practical purposes. These are all based on the tube-shift principle. I use a vertical shift, as I find it at least as accurate as the lateral shift, and very much more practical. Its greatest advantage is that the radiographer can take the films in the absence of the radiologist, and the latter, after examining the films, is left in no doubt as to whether the technique has been efficiently carried out.—I am, etc.,

Reading. Paul Cave.

Treatment of Sweating Feet

Sir,—Hyperidrosis affecting the feet is becoming a major problem in the Army dermatology. As a result of excessive sweating the affected skin may become thickened, erythematous or white, sodden and tender, and the condition is frequently confused with ringworm of the feet. The efficiency of the soldier is reduced, often rendering marching impossible. Bromidrosis is by no means uncommon and, in addition, presents an embarrassing condition for both patient and companions.

In a certain military hospital solely for the treatment of skin diseases almost every conceivable remedy has been employed, all of which proved most disappointing until bleach solution was tried. This has been used in varying strengths as foot-baths for five to ten minutes night and morning. The best results were achieved from one to two teaspoonfuls of bleach powder to a pint of water, until a mild drying effect of the

feet was obtained. A little supervision is necessary to prevent the feet getting too dry, and as improvement occurs the treatment can be performed less frequently. Results have been outstanding, and in the majority of cases the patient returns after a week stating, in enthusiastic terms, that he is greatly improved.—I am, etc.,

E. COLIN JONES,
Capt., R.A.M.C.

The Common Cold

SIR,—I was much interested by the connexion that Dr. Braithwaite sought to establish between "psychology" and the common cold. While unprepared as yet to trounce him so soundly as Dr. Leslie, I would like to lay two questions before him:

1. Will he give us an inkling as to what this mysterious state of mind is? After all, if he has discovered what to the laity is the still undiscoverable riddle of the medical universe, I think he ought in all conscience to share it with the rest of us.

2. If I do right to suppose it is an asocial frame of mind, may it not be induced by the incubation period of the incipient cold? For I assume that a coryza has an incubation stage like any other zymotic disease. And we all know, for instance, the disconsolate or peevish child who snarls at us for three days while "sickening for something," only to greet us with a bright smile and an equally bright morbilliform rash on the fourth.

I have perforce made some slight study of the common cold, and while regarding it as no less specifically infective than measles or mumps, I fancy I can trace at least one definite point of contact with "psychology." That is, briefly, through abuse of the sexual function, normal or otherwise. This might operate by way of a general asthenic state, but I think it may well be due to an autonomic reflex arc. The erectile tissue of penis or clitoris is innervated by the parasympathetic, and I understand that the bulbar part of this system has ramifications controlling the sinusoids or vascular spaces of very similar tissue in the upper nares. And would not congestion in this region provide an admirable nidus for any or all of the numerous organisms that can cause the common cold?

I was led to this conjecture by a patient who was a morbidly introverted onanist and came up demanding some sleeping pills because, he said, sleepless nights tempted him to gross indulgence in his vice, and he "always woke up next morning or next but one with a rotten cold."

Further inquiry among cold sufferers and psychologically maladjusted persons confirms me in my view that there is "something in it," although it must be only a very minor aetiological factor as to colds.

But, unlike Dr. Leslie, I do not despise the medical psychologist. For if he can exhort a certain type of case to improved control over his libido, I am finding that the psychologist can just occasionally cure a cold for me—or rather, I should say, prevent many colds. The typical case is somewhat rare, but in him (or her) the response is remarkable.

—I am, etc.,

Birmingham. PETER PARRY.

SIR,—The statement in my letter (Oct. 2, p. 433) that "the specific factor is psychological; the microbic one secondary," to which Dr. Leonard Leslie takes exception (Oct. 16, p. 494), is an expression of my personal opinion, and I believe it will be found to be correct. I believe, moreover, that cold "proneness" is evidence of the widespread nature of the national neurosis, which is far more to be deplored than the colds that originate in it.

Dr. Leslie need not fear any power I have in an advisory position in the Ministry of Health. I am merely employed by the Ministry as consulting psychiatrist under the Emergency War Hospital scheme. If I had any power at the Ministry of Health I should immediately use it to solve the problem of the national neurosis and the cold by a concentrated attack upon the former by the means that are at present available. They are not by any means scanty.—I am, etc.,

E. WRIGLEY BRAITHWAITE.

SIR,—I was interested in Dr. E. W. Braithwaite's letter on this subject as at the time I was laid up with a cold. Perhaps Dr. Braithwaite would state what "particular emotional state" he finds in those patients whom he has treated for "colds." So far as I am aware I was normal in every way before my attack. Dr. Braithwaite ascribes a very minor role to the microbes and "micromicrobes" (which I think would be a better name than "viruses").

I remember reading in the narrative of one of the Antarctic expeditions that the crews were free from colds except on those occasions when fresh bales of blankets or clothing were opened up. Then colds became epidemic. If Dr. Braithwaite's theory be correct, it was a very strange coincidence that the "particular emotional state" which he speaks of always coincided with the opening of a bale of blankets or clothing.—I am, etc.,

Birmingham. ROBERT ANDERSON.

Shortage of Institutional Provision for Mental Defectives

SIR,—It is becoming increasingly difficult to find accommodation for patients, especially mentally defective children and chronic cases, needing any sort of institutional care. This is particularly marked in cases where it is desirable to send maladjusted or defective children away from home. Apparently this is due to the closing of many establishments owing to staff difficulties. I wonder if the Ministry of Labour realizes that what it is gaining on the swings it is losing on the roundabouts by this policy. Treatment away from home in very many of these cases is the only hope of cure for the children. Adequate care and supervision would be of very great benefit to them, and would set free many mothers for some form of war work where they would be more usefully occupied than in coping with children whom they cannot help because they do not understand them.

This difficulty apparently is very widespread, and the absence of facilities is putting obstacles in the way of dealing effectively with such patients and also with their relatives and their call-up problems.—I am, etc.,

London, W.1. MARION GREAVES.

Low Fecundity

SIR,—In the important summary of the views of British and American investigators on sterility and impaired fertility published in your issue of Oct. 16 frequent reference is made to low fecundity in both men and women. No reference is made to the possibility of treating low fecundity with wheat-germ oil and vitamin E. There seems to be evidence in its favour in both human and animal treatment. I have also known a few cases in which there was no family and in which after adoption of a baby there followed some apparent fecundity stimulation as evidenced by a birth within two years of adopting the baby. Is it possible there is some psychological stimulation of ovarian activity?—I am, etc.,

Oxford. HENRY T. GILLETT.

Mosquitoes and Static Water Tanks

SIR,—Dr. A. G. Newell in your issue of Oct. 2 (p. 435) advocated the breeding of certain small fishes as the best anti-malarial measure.

May I suggest the claims of *Gambusia holbrooki*. Last April Vice-Admi. Muselier, writing on "Bizerta" in the *Spectator*, said: "The marshes, which lie in the S.W. corner of the lake at Mers-el-Kebir, were filled up with silt as a measure against malaria. The lakes and streams were populated with *Gambusia*, provided free, from the Navy, to destroy the mosquitoes, which are bearers of the malarial germ. The *Gambusia* is a little fish which devours every day ten times its own weight of mosquito larvae." This species is common in the U.S.A. and easily transportable. I have kept some with other tropical fish for months in a tank.

In a recent Indian Army Order canalization and oiling, etc., are quoted as the leading methods of larvae destruction, but I agree with Dr. Newell in favouring the development of natural enemies of the larvae. There should be no insurmountable difficulties in getting large quantities of *Gambusia* from America.—I am, etc.,

Dalkeith. G. DOUGLAS GRAY.

In experiments on young chicks Dr. Hans Selye (*Canad. med. Ass. J.*, 1942, **47**, 515) shows that administration of desoxycorticosterone acetate produces nephrosclerosis accompanied by dilatation and hypertrophy of the heart, and tissue oedema, ascites, and pericardial effusion. He believes that this experiment and other relevant facts hint that adrenocortical involvement may be a causative factor in nephrosclerotic hypertension.

Obituary

R. H. J. FETHERSTON, M.D., F.R.A.C.S.

Dr. Richard Herbert Joseph Fetherston, formerly Director-General of the Australian Army Medical Service, whose death we announced last week, was elected a Vice-President of the B.M.A. in connexion with the Melbourne Meeting of 1935. He was one of four generations of medical practitioners, his grandfather practising in Ireland at Roscommon and his father in Melbourne. He began the study of medicine in Dublin, where he qualified in 1884, and then went on to Edinburgh, graduating M.B., C.M.Ed. in 1886 and M.D. in 1888, in which year he returned to Melbourne and took the M.D. degree there also. After holding demonstratorships at Edinburgh he began general practice in Melbourne, and was elected honorary surgeon to the Women's Hospital in 1891. After 22 years in that post he became honorary gynaecological surgeon to the Melbourne Hospital. Dr. Fetherston's military record speaks for itself: he joined the Victorian Militia in 1887 and served continuously in this and, after the Federation of Australian States, in the A.A.M.C. till 1919. In August, 1914, he was appointed Director-General of Medical Services of Australia, and held that position throughout the last war. He saw active service over-seas and was specially mentioned in Army Orders. In 1916 he was promoted to the rank of major-general and held it afterwards on the retired list. In the B.M.A. Dr. Fetherston's record is no less impressive: he joined the Association in 1890, had been a member of the Victorian Branch for 38 years, held office as vice-president of the Branch in 1910, president in 1911, and member of council for many years. He was an original member of the Federal Committee of the B.M.A. and continued to serve on it for 20 years. He was also a director of the Australasia Medical Publishing Company, controlling the *Medical Journal of Australia*. Dr. Fetherston had been a member of the Medical Society of Victoria for 55 years, and served for a time as president of the Medical Benevolent Association of Victoria. He was a justice of the peace for 40 years, and sat for a time in the State Parliament of Victoria.

Prof. R. J. A. Berry sends the following appreciation:

It is a common but in many cases an erroneous belief that versatility in a man denotes nothing more than a Jack-of-all-trades and a master of none. The late Dr. R. H. J. Fetherston—Bertie to his innumerable friends—was undoubtedly a man of great versatility, and ranged from the activities of peace to the changed conditions of war and from war back again to peace, and in everything he did he was extraordinarily efficient, as his record shows. Fetherston graduated in Edinburgh in 1886, and settling in Melbourne eventually devoted himself to obstetrics, and in this the major work of his life soon made a reputation for himself not only among his own professional brethren—who later honoured him by making him a Foundation Fellow of the Royal Australasian College of Surgeons—but also among that large lay public who knew and trusted the professional skill and acumen of "Bertie" Fetherston.

The first major revolution in the life of Dr. Fetherston occurred, just as it did with so many others, with the outbreak of war in 1914. Australia was at that time singularly unprepared for war of any kind. Called upon by the Commonwealth Government to undertake the oversea duties of Director-General of the Australian Medical Service, his was the task of creating an oversea Army Medical Service to accompany the Australian Expeditionary Force. That Fetherston accomplished this task to the entire satisfaction of the Government and without utterly disrupting the ranks of the medical profession at home testifies beyond words his efficiency and tact. He sought no honours and he got none, but he lives in the memory of all who were then intimately associated with him and knew the value of his work for King and country.

With the return of that so-called peace which the armistice of 1918 thrust on a jaded world Dr. Fetherston soon found new worlds to conquer. The Edward Wilson (Argus) Trustees decided to endow obstetrical research in Victoria and to do so with a gift of £10,000. It was only natural that Fetherston should be appointed one of the medical administrators of the Trust, which was representative of the University of Melbourne and of the hospitals and the Victorian Branch of the British Medical Association. Dr. Fetherston took the keenest interest in the research, and when the valuable report came to be published he was one of the first to insist on the research being prosecuted to its logical conclusion—namely, the creation of a chair of obstetrics in the University of Melbourne, and what was even more imperative in finding means of finance. Nor was this all. Throughout these versatile activities of war and peace Dr. Fetherston remained a veritable pillar of support to the Victorian Branch of the B.M.A. His advice was constantly sought and constantly given, and there are probably still some alive who will remember sitting with Fetherston until midnight and after in the council chamber of the Branch discussing ways and means of advancing the progress and welfare of the Association in general and of obstetrics in particular.

Fetherston did not carry his heart upon his sleeve, but he was well worth getting to know, and the better one knew him the more one appreciated the honesty, kindliness, and professional skill and acumen—the versatile man of war at its worst and of peace at its best. Whatever Fetherston's faults may have been he never failed a friend or the profession of which in his own quiet way he was so distinguished and so effacing a member.

STEPHEN THOMAS FALLA, M.D., M.R.C.P.

We regret to announce the death on Sept. 16 of Major Stephen Falla, who was drowned while bathing in the Middle East, where he was serving as a medical specialist. Born in 1910, the youngest son of Mrs. L. Falla and the late Alfred Falla of Guernsey, Stephen Thomas Falla received his medical education at the London Hospital, qualifying M.B., B.S. in 1933, and obtaining his M.D. in 1935 and his M.R.C.P. in 1937. After holding the posts of emergency officer and clinical assistant to out-patients at the London Hospital, he became house-physician at the Brompton and then at the Royal Free Hospital. Later he was R.M.O. to the Royal Masonic Hospital. In 1937 he was elected honorary physician to the Norfolk and Norwich Hospital and honorary assistant physician to the Jenny Lind Hospital for Children. Two years ago he joined the R.A.M.C. and was given the rank of major.

A colleague writes:

The medical profession has lost a physician of much promise and great charm by the untimely death of Stephen Falla. He was keen and conscientious in all that he undertook to do. His experience at the Brompton Hospital gave him a natural leaning towards diseases of the chest, but his outlook was broad, and in particular he became an adept with the gastroscope. During the early part of the war he acted as resuscitation officer and he organized very efficiently a blood transfusion service for the county and city of Norfolk. Another of his activities was the honorary secretaryship of the Norfolk and Norwich Medico-Chirurgical Society. Falla had a subtle sense of humour and an enjoyment of life which endeared him to many. He was a great lover of good music; while one of his chief hobbies was sailing and he was an ardent and strong swimmer, which makes his end all the more tragic. His death is a sad loss to very many in Norfolk and Norwich.

E. H. A. PASK, M.D.

Dr. E. H. A. Pask, medical superintendent of the Wrightington Hospital, Lancashire, and a consultant tuberculosis officer of the Lancashire County Council, died on Oct. 4 at his residence on the hospital estate. Edward Henry Allon Pask, who was born at Worksop in 1884, qualified M.B., B.S.Lond. and M.R.C.S., L.R.C.P. in 1906, and two years later took the M.B., Ch.B. of Sheffield University; he proceeded to the M.D.Lond. in 1912. After 15 months of house appointments at the Sheffield Royal Infirmary and some private practice he went into the Colonial Service, being posted to Nyasaland. He returned to the Sheffield Royal Infirmary and became senior house-physician and resident surgical officer. After acting as assistant medical superintendent of North St. Pancras Infirmary, he entered the tuberculosis service as assistant to the late Dr. Dixon at the Birmingham Tuberculosis Dispensary and Yardley Road Sanatorium. This was the period of "mass" inoculation of tuberculin, about the time the National Health Insurance Act came into force. Later he became medical superintendent of the Salterley Grange Sanatorium, near Cheltenham, where his chairman was Neville Chamberlain. In 1913 he started with the Lancashire County Council and undertook dispensary work until the outbreak of the war, when he joined the Forces. Returning to civilian life in 1916 he became the first medical superintendent of the newly built High Carley Sanatorium, near Ulverston. In 1931 he was promoted to the Wrightington Hospital for non-pulmonary tuberculosis (226 beds), which had just been completed. He was also responsible for the dispensary work in the surrounding Wigan county area,

which had a population of 105,000. He went to Canada and the United States in 1930 with a party of British tuberculosis officers; he also undertook, at the request of the Ministry of Health, an investigation in Germany into the merits of Gerson's salt-free diet. Pask was an outstanding example of the first-rate administrator who had at the same time first-rate clinical ability. Urbane, thorough, and most competent, he earned the confidence, respect, and affection of his colleagues.

A. J. CAIRD, F.R.C.S.Ed.

By the death on Oct. 11 at the early age of 52 of Mr. Andrew J. Caird, honorary surgeon to the Cumberland Infirmary, Carlisle, the profession, and especially that of Carlisle and the surrounding district, has suffered a severe loss.

Caird was a brilliant dux of Perth Academy, and he graduated from Edinburgh University with distinction in arts, science, and medicine, qualifying M.B., Ch.B. in 1916. He saw service in the last war with the R.A.M.C. in this country and in Salonika. After the war he took the Fellowship of the Royal College of Surgeons of Edinburgh. Towards the end of 1920 he purchased the practice of the late Mr. Edwards in Carlisle, but on being appointed honorary assistant surgeon to the Cumberland Infirmary three years later he devoted himself entirely to the practice of surgery. He was a first-class surgeon, and his sound judgment and the skill of his hands won him an extensive consulting practice on both sides of the Border District. He was secretary of the local Branch of the B.M.A., and it was his knowledge and ability in affairs that largely guided its activities. He conducted the weekly orthopaedic clinic of the Social Service Centre as honorary surgeon, and acted in that capacity to the Carlisle Dispensary and as senior surgeon to the City General Hospital.

A colleague writes: Caird had the creative mind of the artist, and to his extensive knowledge wisdom was early added, and increased with the passing years. He found time to etch and paint, to write light verse, to garden, to fish, and to cultivate his friends. His etchings and water-colours could bear judgment by professional standards, and he had exhibited at the Scottish Academy. He was, however, at his best round the fire after dinner. Then he talked well and was a wonderful listener, so that the shyest found his tongue. His keen sense of humour kept dullness even from the most serious discussions. The loss of his eldest boy in a flying accident two years ago was a heavy blow to him, but few were allowed to know how much he felt it. There are heavy hearts to-day among his friends and colleagues, while his loss will be keenly felt by many old patients. Our sympathy goes out to his wife and the two remaining boys in their sorrow.

CECIL ROWNTREE, F.R.C.S.

Mr. E. T. C. Milligan writes:

Cecil Rowntree was a gay courageous fighter. His last battle was a victory against an incurable bodily disease. It was a dull soul that was not inspired by the spectacle of his triumph over pain and suffering. He started life exceptionally well equipped in body, intellect, and imagination. By hard work he gained the F.R.C.S. at the early age of 23. He began his fighting career when on a matter of principle he took a decision which closed the door to quick security and higher appointment, and which meant that he trod the harder and longer road. From then onwards throughout his life principle and loyalty always came before expediency and personal advantage. He never compromised on this. He fought for reforms and innovations in all branches of our profession and was ever ready for change. A "rut" to him was a grave without the ends. Later in life he expressed himself well pleased with his early choice because of the friendships, the opportunities, and the work it had brought. His influence was wide in London and throughout the country. Many practitioners and young surgeons "went to him by night" to seek his opinion on some difficult surgical or ethical problem. They were received with the warmest friendship and left inspired and determined to take the right course. He created respect, loyalty, and confidence in his house-surgeons, who regarded him as a leader and pioneer demanding high standards of truth and work. Many of us in our daily work recognize some gem of technique, some dominant sign in diagnosis, some unvarying behaviour of disease, as something learnt from him that we have grafted into our own equipment. We will now have these as personal memorials of one who was our teacher.

Rowntree began his surgical career at a time when it was a custom to operate in the homes of the patients or in poorly equipped nursing homes. The surgeon then carried an operating table as part of his equipment. He became inured to the difficulties of bad lighting, poor or no assistance, and the unskilled anaesthesia of those days, but he was always a friend of his assistants, for the man to him was greater than his accomplishment, and the sick more important than sickness. He maintained the British tradition by being a great home-maker. His wife was at his right hand in this, and in all his enterprises she understood and inspired him. Finally, she accompanied him through his last great struggle with his own illness. With the passing of Cecil Rowntree the medical profession loses a distinguished member; his colleagues have lost a loyal, lovable, and inspiring friend; his country mourns a great home-maker and citizen.

⁂ Our obituary notice gave the date of Mr. Rowntree's death incorrectly. He died on Oct. 14.

A. I. SIMEY, M.D.

An old Rugbeian writes:

May I add a few words to the interesting supplementary memoir of the late Dr. A. I. Simey in your issue of Oct. 9 (p. 468). A. I. was the youngest of three brothers who were in turn at Rugby. The two elder, who were there in my time, R. I. and G. I., were each holders of scholarships and each in due course became head of the school—R. I. in 1881, G. I. in 1885. A. I. followed suit and, winning a scholarship in 1886, became head of the school in 1891. Such a series of brilliant school careers in one family and at the same school must be almost, if not quite, unique.

Dr. Alfred Reuben Aubrey died at his home in Bristol on Sept. 18 in his 82nd year. He studied medicine at Bristol and Newcastle-upon-Tyne, graduated M.B. of Durham University and took the M.R.C.S. diploma in 1885, and proceeded M.D. in 1890. For over 30 years Dr. Aubrey practised at Weston-super-Mare, and after the death of his wife in 1932 he went to live at Redland, Bristol, with his daughter. Until very recently he enjoyed fairly good health. He joined the B.M.A. in 1895 and remained in membership until his retirement from active practice.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a Congregation held on Oct. 15 the following medical degrees were conferred:

M.D.—M. J. Clow and A. L. Fawdry (by proxy), H. L. Hoffman, and B. L. F. Heydon.

M.B., B.Chir.—M. C. Cross, P. Unwin, M. M. Walker, P. A. O. Wilson, A. J. Gray, E. N. M. Johnston, D. C. Sturdy, J. L. S. Smith, P. R. Swyer, C. O. Edwards, and A. I. MacLeod (by proxy), W. V. Bowman.

M.B.—J. L. Potts and G. H. Ward (by proxy).

UNIVERSITY OF SHEFFIELD

The University Council has made the following appointments: Dr. A. I. G. McLaughlin, M.R.C.P., as honorary lecturer in industrial medicine within the Department of Public Health; Drs. P. E. H. Howarth and R. E. Peasegood as temporary demonstrators in anatomy; and Capt. J. H. Hale, M.B., as assistant bacteriologist and demonstrator in bacteriology.

The Council received with regret the resignation by Dr. M. Laird of his post of demonstrator in anatomy and accorded its thanks to him for his services to the University.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Mr. H. S. Souttar, C.B.E., F.R.C.S., will deliver the Bradshaw Lecture on "Physics and the Surgeon" at the College, Lincoln's Inn Fields, W.C., on Thurs., Nov. 11, at 3.15 p.m. Students and others who are not Fellows or Members of the College will be admitted on presenting their private visiting cards.

At a quarterly meeting of the Council held on Oct. 14, with Sir Alfred Webb-Johnson, President, in the chair, a resolution of condolence was passed on the death of Mr. John Murray, F.R.C.S. The Council decided to reopen the Bernhard Baron Research Laboratories at the College as soon as they can be reconditioned. Dr. F. K. Sanders was reappointed a Leverhulme Scholar for a second year as from Oct. 1, 1943.

It was reported that the following appointments had been made by the Mackenzie Mackinnon Research Fund Committee of the Royal Colleges of Physicians and Surgeons:

Dr. Geoffrey Bourne (Oxford) (reappointed). On the comparative histology of the mammalian adrenal gland; the role of vitamin C in the regeneration of bone, with special reference to the acceleration of the healing of fractures.

Miss Jean M. Dollar (Royal Eye Hospital). An investigation into the value of cockerel serum in ophthalmic surgery, with especial reference to its use in connexion with mucosal and corneal grafts.

Miss Shirley M. Draycott (Royal College of Surgeons). The effect of the administration of sulphydryl amino-acids on the anti-syphilitic action of arsphenamides.

It was reported that the Blane Medal had been awarded to Surg. Cmdr. D. P. Gurd, R.N., for his thesis entitled "An Investigation into the Incidence of Trachoma in the Maltese Islands."

A Diploma of Fellowship was granted to F. H. Masina and Diplomas of Membership were granted to C. O. Fung-Kee-Fung, R. N. G. Holloway, L. Howell, P. H. Huggill, J. A. Loveless, R. G. May, A. D. Payne, M. I. Pott, N. H. Seaton, and B. A. Ward.

A Licence in Dental Surgery was granted to A. C. Horne.

Diplomas in Child Health were granted, jointly with the Royal College of Physicians, as follows:

Patience E. Barclay, Monica M. Bird, J. P. Bound, Annie E. Burns, Cecil M. Drillich, Margaret Egan, H. V. L. Finlay, Cecilia Henry, L. Hornung, Margaret M. P. Jolly, F. L. King Lewis, F. G. Leslie, Kathleen B. McClintock, Rosaleen De C. McCormick, Mary H. McC. Snape, Cecilia V. Urquhart, Fanny D. Wride, H. J. Young.

The Services

Prob. Temp. Surg. Lieut. M. J. Hood, R.N.V.R., has been awarded the D.S.C. for courage, endurance, and great skill in tending the wounded when H.M.S. *Achates* was lost.

The following appointments, awards, and mentions in recognition of gallant and distinguished services in the Middle East have been announced in the *London Gazette*:

C.B. (Military Division).—Brig. K. MacCormick, C.B.E., D.S.O., K.H.S., New Zealand Military Forces.

C.B.E. (Military Division).—Brig. (local) W. D. D. Small, R.A.M.C.

O.B.E. (Military Division).—Majors (Temp. Lieut.-Cols.) D. M. Blair, R. H. Bland, E. Bulmer, J. B. S. Guy, T. D. Phelan, and V. C. Verbi, R.A.M.C.; Major A. L. Chute, R.C.A.M.C. (attached R.A.M.C.); H. W. Farrell, J. Morgan, I.M.S.

M.B.E. (Military Division).—Major P. J. May, Capts. (Temp. Majors) A. K. Borland, D. MacL. Douglas, M. H. Evans, C. P. Stevens, and J. C. Summ, R.A.M.C.; Capts. H. C. Allan, K. G. A. Barlow, A. M. Lester, G. B. Northcroft, K. R. D. Porter, and A. F. Smith (deceased), R.A.M.C.

D.S.O.—Majors (Temp. Lieut.-Cols.) L. T. Furnivall and R. McI. Gordon, D.F.C., R.A.M.C.

M.C.—Capts. R. G. MacLeod, A. D. Parsons, M. J. Pleydell, J. W. Taylor, and C. W. Warner, R.A.M.C.

Mentioned in Dispatches.—Capts. (Temp. Majors) R. W. Cope and G. M. Willoughby, R.A.M.C.

The following appointments and mentions in recognition of gallant and distinguished services in Malta have been announced in the *London Gazette*:

C.B.E. (Military Division).—Col. F. Whalley, D.S.O., T.D., K.H.P., late R.A.M.C.

M.B.E. (Military Division).—Capt. (Temp. Major) H. G. G. Bernstein, R.A.M.C.

Mentioned in Dispatches.—Capt. (Temp. Major) (Acting Lieut.-Col.) C. J. Cellan-Jones, Capt. (Temp. Major) W. O. MacFeat, Capts. C. V. Light and R. Mitchell, R.A.M.C.

CASUALTIES IN THE MEDICAL SERVICES

Surg. Lieut.-Cmdr. D. J. Wilkes, R.N.V.R., was killed in action recently by a bomb splinter and buried at sea. He began his education at the Old Edgbaston School and later at Birmingham University. He acted as house-surgeon at the General Hospital, and afterwards joined his brother-in-law, Dr. Dennis Allin, in practice in Birmingham. He volunteered for the Royal Navy and was called up at the outbreak of war. He took part in the Lofoten raid, the Dieppe raid, the Algiers raid, and finally Sicily. Tributes to him were received from the captains of the ships in which he had served. Officers and men alike wrote and mourned his loss. One tribute was from the Commander-in-Chief of the station in the Mediterranean, who wrote to his captain: "It was a most unfortunate and sad thing that you should have lost Wilkes at a time when he was badly needed, and the more so when he had given such good service and his relief was on the way. A man of such sterling character and so many excellent qualities will be greatly missed. We cannot afford to lose such as he."

Killed.—Capt. J. O. D. Williams, R.A.M.C.

DEATHS IN THE SERVICES

To many retired R.A.M.C. and I.M.S. officers who had served in India and Burma the news of the sudden death on Sept. 16 of Capt. T. Henderson Brooks, I.M.D., will come as a shock. In his 33 years of service in the various large station hospitals in India he had come to be recognized as a very efficient organizer and administrator in hospital matters. A correspondent writes: His genial, jovial personality, sincere and humble ways, and his ever-ready willingness to help and to advise, earned for him the respect and affection of officers and men alike. Born in 1872 in Karachi, son of one of the earliest settlers in the Province of Sind, he entered the military medical service in 1894. Till 1897 he was employed on plague duty in the Bombay Presidency, receiving the personal thanks of the Governor for his services. In 1898 he received the Tirah campaign medal with clasp—actually helping Piper Findlater when the latter gained the V.C. From 1901 to 1911 he was in Burma to deal with the very severe plague epidemic prevailing there. His elder son contracted the disease but survived. Once again for his services he earned the commendation of the Governor and the public. He was specially chosen in 1912 to accompany the Hkhomptilon Expedition to the frontiers of Burma and China. Returning to military duty in 1916, he saw service with the 19th Indian General Hospital in Salonika. After his return to India in 1919 he became personal assistant to the A.D.M.S. on the Raymak Expedition of 1921–2. Besides the medal he was mentioned in dispatches and received special promotion. On retirement from military service Capt. Brooks settled in Karachi and continued to keep alight the reputation and skill of the family in the Province as physicians—a reputation established by his father and handed down to each brother in turn (for there were several brothers as doctors) for a period of nearly a hundred years. He leaves a widow and two sons: one is serving in the Indian Army in the Middle East and one practising in Gloucestershire.

Fl. Lieut. John Kenneth Denham died on May 9 while on active service, aged 37. He studied medicine at Cambridge and St. Thomas's Hospital and qualified M.B., B.Chir., M.R.C.S., L.R.C.P. in 1938. After holding house appointments at St. Thomas's, the Brompton Hospital, and the Western (L.C.C.) Hospital, Fulham, he was appointed to a commission in the Medical Branch, R.A.F.V.R., on June 13, 1943. At the date of his death he was medical officer to a squadron operating over-seas.

Medical Notes in Parliament

Regulation 33B

Mr. Ernest Brown, in reply on Oct. 14 to Mr. Graham White, said that Regulation 33B was substantially helping local authorities to get into touch with persons suffering from venereal disease and to induce them to undertake treatment. Up to June 30 last 1,893 cases were brought to the notice of medical officers of health in this way. The number of cases reported more than once as alleged sources of infection was 110. In 3 cases it was necessary to take proceedings for failure to carry out treatment. Dr. Summerskill commented that only six men had been reported under Regulation 33B. Mr. Brown said the Regulation was making a very useful contribution to reducing the incidence of venereal disease. Sir A. Beit asked whether the majority of the 1,800 cases were persons who had been compulsorily examined. Mr. Brown said they were cases brought to the notice of medical officers.

Hetherington Committee's Report

Mr. Johnston said on Oct. 13 that he had that day received the report of the Hetherington Committee on the Reorganization of Scottish Hospitals. The report contained many important recommendations affecting the future of the hospital system of Scotland. Those recommendations were being considered in connexion with the Government's examination of the whole question of a new national health service.

Physical Fitness for Employment

Mr. Rhys Davies asked on Oct. 14 whether Mr. Bevin knew of the growing practice of employers to engage medical officers to examine prospective employees; that this practice tended to transfer the determination of employment into the hands of the doctors, increased unemployment, and must create a pool of permanently unemployed persons, especially if the medical fitness required was of a progressively high standard.

Mr. Bevin replied that his policy was to encourage the greater use of doctors' services in industrial establishments in the interest of the medical welfare of the employees. He had no evidence that this led to the imposition of unnecessarily high standards of physical fitness in prospective employees. He could not undertake to inquire at this stage whether pressure was brought to bear on employers by the insurance companies dealing with workmen's compensation so as to avoid compensation risks. He had an arrangement that a man who passed out of employment through injury or was unsuitable to go back into the employment was taken over immediately for training in some other employment.

Army Medical Services

On Oct. 19 Mr. HAMMERSLEY asked the Secretary of State for War if he had considered the complaints reaching him concerning inadequate medical attention in the armed Forces. Sir JAMES GRIGG replied that individual complaints about the Army medical services reached the War Office from time to time from various sources. The complaints were always investigated, and in most cases were found to be without foundation. When there was ground for complaint it was the fault either of an individual or of the local administrative machinery, and action was at once taken to avoid repetition of the fault. He was not, however, aware that there was any body of complaint about the general organization and administration of the Army medical services. In general, considering the special difficulties with which Army doctors had to contend and the impossibility of meeting the Army's full requirement of doctors, he was satisfied that the medical service given by the Army was good. An investigation was now proceeding to ensure that medical officers at home were used to the best advantage of the Army. His view was borne out by tributes paid by all ranks to the work done by the medical services with the Army over-seas. Sir James Grigg also told Mr. Hammersley that, without notice, he could not say anything about recent improvements in the early diagnosis of tuberculosis in the Army.

Accidents in the Mine.—During a debate on the coal-mining situation, Mr. THOMAS SMITH said that in 1943 to date 542 men and lads had been killed. For the same period last year the figure was 689. Progress had been made in treating fracture cases. To-day facilities for rehabilitation were provided in every colliery district; there were eight residential centres. For every man injured in a factory six men were injured in the pit.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* scarlet fever, measles, and acute pneumonia became more prevalent during the week, notifications going up by 293, 116, and 148 respectively. Those of whooping-cough and dysentery fell by 102 and 74.

The small general rise in the notifications of measles ends the continuous drop in incidence that has lasted for the past seventeen weeks. Although there were only 8 more cases of diphtheria than in the previous week, the county totals varied considerably. In the south (London, south-eastern, and south-western divisions) the combined total rose by 42. The only notable decrease was in Durham, with 22 fewer cases. Whooping-cough incidence was down by 50 cases in Yorks West Riding, by 40 in Lancashire, and by 23 in Middlesex; the only noteworthy exception to the general trend was a rise of 37 in Essex. The increased prevalence of acute pneumonia was fairly general, the largest rises being 22 more cases in Durham and 21 more each in Lancashire, London, and Yorks West Riding.

Notifications of scarlet fever are now double what they were seven weeks ago, and the 3,249 cases now recorded (week ending Oct. 9) form the largest number for several years. The largest weekly total in each of the six years 1937–42 was: 2,717, 2,463, 2,012, 2,027, 1,419, 2,979. The biggest rises during the week under review were in Lancashire by 73, Yorks West Riding by 38, Essex by 52, and Kent by 35.

Despite the fall of 74 cases in the weekly figure for dysentery, the notifications exceed 260 for the fourth consecutive week. Notifications dropped in three of last week's epidemic areas—London 91 to 52, Lancashire 42 to 20, Essex 33 to 17—while there was a small rise in the fourth area, Kent, from 57 to 59. In several other areas there were increases, chiefly in Yorks West Riding by 18, Middlesex by 14, Hertfordshire by 12, Yorks North Riding by 9, and Gloucestershire by 11.

In *Scotland* there were 34 more cases of dysentery, 41 of whooping-cough, and 22 of acute pneumonia; diphtheria incidence was lower by 25 cases. The increase in dysentery was mainly due to an outbreak in Dunbarton County, where the cases rose from 4 to 42. The largest of the other centres of infection were the cities of Glasgow, 12, and Edinburgh, 11 cases. Of the 181 notifications of whooping-cough 120 were recorded in Glasgow.

In *Eire* the increase in diphtheria of 33 cases was spread generally throughout the country.

In *Northern Ireland* 60 of the 95 cases of scarlet fever were notified in Belfast.

The Week Ending October 16

The returns of infectious diseases in England and Wales during the week included: scarlet fever 3,324, whooping-cough 1,482, diphtheria 707, measles 675, acute pneumonia 569, cerebrospinal fever 37, dysentery 253, paratyphoid 3, typhoid 5.

No. 40

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended Oct. 9.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland

Figures of Births and Deaths, and of Deaths recorded under each Infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1943 (a)	(b)	(c)	(d)	(e)	1942 (Corresponding Week) (a)	(b)	(c)	(d)	(e
Cerebrospinal fever	30	4	18	—	—	57	5	17	1	—
Deaths		—	1				1	—		
Diphtheria	732	37	167	93	44	991	47	220	71	29
Deaths	9	1	3	—	1	12	—	3	2	—
Dysentery	263	52	96	—	—	209	16	45	—	—
Deaths				—	—				—	—
Encephalitis lethargica, acute	1	—	2	—	—	3	—	—	—	—
Deaths		1					—			
Erysipelas			59	9	1			63	11	2
Deaths		—					—			
Infective enteritis or diarrhoea under 2 years				72					62	
Deaths	46	6	10	17	5	57	8	7	22	7
Measles	581	55	52	18	4	4,650	329	303	40	11
Deaths	—	—	1	—	—	8	—	1	—	—
Ophthalmia neonatorum	70	3	19	1	2	104	6	28	3	—
Deaths										
Paratyphoid fever	8	—	1	—	—	11	2	4		
Deaths	—	—	—		—	—	—	—		—
Pneumonia, influenzal*	557	37	5	2	5	541	27	9	—	6
Deaths (from influenza)	14	1	2	—	—	12	—	1	—	1
Pneumonia, primary			177	19				160	9	
Deaths		20		14	13				9	7
Polio-encephalitis, acute	1	—				2	—			
Deaths		—					—			
Poliomyelitis, acute	15	—	2	2	—	23	—	2	28	—
Deaths		—					—			
Puerperal fever		4	14	—	1		1	8	4	—
Deaths		—					—			
Puerperal pyrexia†	159	6	8	—	3	192	12	8	—	—
Deaths		—					—			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	3,249	309	385	47	95	2,613	165	407	54	60
Deaths	1	—	—	—	—	1	—	2	—	—
Smallpox	—	—	—		—	—	—	—		—
Deaths				—	—	—	—	—	—	—
Typhoid fever	9	—	3	13	—	6	—	3	7	5
Deaths	—	—	—	—	—	1	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths				—	—			—	—	—
Whooping-cough	1,481	101	181	42	19	972	96	26	31	3
Deaths	11	2	3	1	1	6	3	3	3	—
Deaths (0–1 year)	273	35	45	35	24	325	34	50	43	26
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	3,861	591	550	182	127	3,826	534	518	204	119
Annual death rate (per 1,000 persons living)			12·4	12·0	‡			11·7	13·6	‡
Live births	6,290	785	937	400	284	6,292	739	894	426	248
Annual rate per 1,000 persons living			19·1	26·3	‡			18·5	28·4	‡
Stillbirths	190	27	27			229	25	35		
Rate per 1,000 total births (including stillborn)								38		

* Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

† Includes puerperal fever for England and Wales and Eire.

‡ Owing to evacuation schemes and other movements of population, birth and death rates for Northern Ireland are no longer available.

Medical News

The Food Education Society announces a lecture by Prof. J. R. Marrack, M.D., on "Food and the Post-war World," to be given on Nov. 15, at 3 p.m., at the London School of Hygiene, Keppel Street, W.C.1.

After the annual general meeting of the British Social Hygiene Council, to be held at B.M.A. House, Tavistock Square, W.C.1, on Monday, Nov. 1, at 3.30 p.m., the president, Sir Walter Langdon-Brown, will give an address on "Social Biology and Planning."

A council meeting of the Medical Superintendents' Society will be held at the Midland Hotel, Derby, on Saturday, Oct. 30, at 2 p.m., and continued on Sunday, Oct. 31, at 10 a.m. and into the afternoon if necessary.

The Princess Tsahai Memorial Hospital Council, of which Lord Horder is the honorary treasurer, will hold a reception to General Sir William Dobbie of Malta at the Dorchester Hotel, Park Lane, W., at 3 p.m. on Thursday, Nov. 4. Lord Davies will preside and the Princess Tenagne Haile Selassie of Ethiopia hopes to be present.

Post-war nutritional relief is to be the subject for discussion at a whole-day conference of the Nutrition Society on Saturday, Nov. 6, at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. The chair will be taken by Lord Horder. In the morning Prof. J. R. Marrack, who is on the Committee for Co-ordination of Nutrition Surveys, will speak about experiences of the last war and since, dealing especially with the current state of nutrition in occupied Europe and elsewhere. A discussion on this paper will be opened by Surg. General Dr. K. Evang of the Norwegian Ministry of Social Welfare. Mr. J. Hammond, D.Sc., F.R.S., will then speak on problems of production in relation to post-war nutritional relief. In the afternoon Dr. Audrey Russell will speak on the organization of nutritional relief in the field, the discussion on this subject to be opened by Prof. E. Nobel, M.D., formerly of Vienna University. The last paper of the afternoon will be by Miss E. M. M. Hume on opportunities for nutritional research in the work of relief. Proceedings will begin at 11 a.m. promptly. Non-members are admitted only through a member's introduction.

The council of the Liverpool School of Tropical Medicine has decided that the sum of £500 placed at its disposal by Sir Robert Rankin, M.P., to commemorate the scientific work of the late Prof. Warrington Yorke, M.D., F.R.S., shall be used to provide a memorial medal, to be awarded twice yearly on the result of the examination held at the end of each of two courses for the Diploma in Tropical Hygiene.

Survivors of the hospital ship *Newfoundland*, which was set on fire and sunk off Salerno on Sept. 13 by a German bomber, stated on their arrival at a Scottish port that the vessel was deliberately singled out for attack. All her lights were on and the Red Cross was clearly visible. There were no wounded on board; but six nurses, all the doctors, and the ship's officers lost their lives. The death-roll totalled 23; the dental surgeons on board escaped. The *Newfoundland* caught fire after a direct hit, and the evacuation of all those whom it was possible to save was effected by members of the crew. Orders were given to abandon ship, and all efforts were concentrated on removing the sick, many of them stretcher cases. In this task doctors and nurses worked heroically. At the time of the bombing the *Newfoundland* was carrying as passengers about 100 American nursing sisters who were to land with the Fifth Army.

The September issue of the *Archives of Disease in Childhood* contains two reports by the British Paediatric Association: one on "The Early Diagnosis of Tuberculosis in Childhood," and the other on "Arrangements for Newly Born Babies in Maternity Hospitals." Copies of these reports may be obtained from the Acting Hon. Secretary of the British Paediatric Association, Dr. Donald Paterson, 27, Devonshire Place, London, W.1.

The second East Asiatic Medical Congress was recently held in Japan and was attended by 300 delegates from countries at present in Japanese occupation. The subjects principally discussed were the campaign against tuberculosis and tropical diseases.

The Mackenzie Mackinnon Research Fund Committee has appointed Miss J. M. Dollar, M.S., F.R.C.S., of the London School of Medicine for Women and the Royal Eye Hospital, to a research fellowship.

The late Dr. William Hartley Tattersall of Deganwy, Caernarvon, who left £111,718 (net personalty £102,316), bequeathed £500 to the Royal Medical Benevolent Fund.

Local authorities are to be allowed a further year, from March 31, 1944, to March 31, 1945, during which they may submit their plans under the Cancer Act, 1939.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, London, W.C.1.

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ANY QUESTIONS?

Osteo-arthritis after Colitis

Q.—*Is there any useful practical treatment for early osteo-arthritis, with painful "locking," in one knee? The patient is a man aged 60. Colitis has been present for many years following a tropical dysentery. This has improved enormously with the onset of the knee trouble. There is definite swelling around the affected knee, but no appreciable fluid in the joint. There is some resistance in the outer region of the popliteal space. Extension of the joint is somewhat limited.*

A.—The active condition in this case would appear to be a villous synovitis, probably infective in nature and associated with the colitis. Arthritis is often a sequel of dysentery, and the improvement in the colitis with the onset of the knee-joint trouble is suggestive. A thorough bacteriological investigation by an expert in tropical diseases would be worth while; if positive, sulphaguanidine should be given a thorough trial. An endocrine disorder is also a possible factor; villous synovitis is the pathological condition in the arthritis of the menopause. Osteo-arthritis has presumably been diagnosed from the presence of exostoses revealed by *x*-ray examination, but these are unimportant unless actually interfering with the movement of the joint. A blocked leather splint to support the joint would control the tendency to "locking." The limitation of extension would probably prevent the use of a Howard Marsh knee splint with a hinge to permit flexion, which could be fixed in extension. An alternative which might be more effective if the patient would tolerate it would be a walking calliper transmitting the body weight from the hip to the heel of the shoe; this would give rest to the knee and permit the synovitis to settle down, and the swelling would improve or disappear. Short-wave therapy often relieves the pain, or ionization with T.C.P., providing the ions of chlorine, iodine, and salicylic acid, is useful. In some cases the electric cautery has proved effective when other methods have failed—the old farrier's practice of "firing" a horse.

Suppressing Lactation in Puerperal Fever

Q.—*What is the best method of suppressing lactation in a case of puerperal fever? The administration of large doses of stilboestrol by the mouth at the same time as the patient is concurrently endeavouring to assimilate full doses of sulphonamide does not seem to me desirable.*

A.—Pregnant and recently delivered women tolerate large doses of oestrogenic substances. Hexoestrol tablets do not produce the toxic effects that stilboestrol sometimes produces. For suppression of lactation by injections one would suggest oestradiol benzoate (50,000 units) three times during the first week on alternate days.

Pernicious Anaemia of Pregnancy

Q.—*A patient 4/12 pregnant developed pernicious anaemia of pregnancy. The response to liver therapy by injection was satisfactory. The last injection was given 3/52 before the birth was due, and she developed a very mild urticarial rash which was not reported until after the birth. During labour she had 1 unit of thymophysin, and almost immediately afterwards became very ill and almost unconscious—her mucous membrane became livid. Adrenaline brought her round, but the child was born dead—from anoxaemia. Now she is pregnant again, and her blood picture is good with taking large doses of pepsac. Skin tests show that she reacts to thymus, pituitary, and liver extract. If the occasion arises—say a P.P.H.—what injection, if any, can be given with safety?*

A.—The fact that this patient gives a positive skin reaction to liver, pituitary, and thymus suggests that she is sensitive to ox protein, which is presumably the common factor. It is likely that desensitization to one of the extracts—e.g., liver extract—would be effective in preventing reactions from the others. In practice, however, it would seem preferable to avoid the use of any of these preparations, and if an emergency arises at the time of delivery (e.g.

P.P.H.), to give ergometrine either intramuscularly or intravenously. The administration of posterior pituitary extracts is always accompanied by the possibility of producing pituitrin shock, the clinical picture resembling that seen in this patient; the use of ergometrine is unaccompanied by such a reaction. It is of interest to note that anaemia came on early during the first pregnancy and was apparently easily controlled, whereas pernicious anaemia comes on late and may be slow to respond even to large and frequent doses of liver. Moreover, it is by no means inevitable that pernicious anaemia of pregnancy should recur in subsequent pregnancies. The diagnosis should therefore be carefully reviewed. If pepsac does not continue to be effective as this pregnancy advances, and reactions are given with a different preparation of liver, transfusion may become necessary to tide the patient over until after delivery.

Note.—Pepsac is the proprietary term for desiccated stomach—the "ventriculus desiccatus" of the *B.P.C.* Desiccated stomach is also marketed under the following proprietary names: erythroid, eugastrol, extomak, gaster siccatus, gastrexo, kytogen, ventraemon, ventriculin. This terminological confusion is to be regretted.

Glycerin in Ointments

Q.—*(a) Is the use of glycerin as a constituent of an ointment or a lotion contraindicated in the treatment of industrial dermatitis or other skin disease? If not, what is its therapeutic use? (b) As glycerin is stated to dehydrate and therefore damage the skin cells, how does it effect its emollient action, and how is its use as an emollient justified? (c) Should glycerin be used at all as a constituent of barrier creams?*

A.—(*a*) No. Glycerin is much used in lotions such as calamine to make the contained powder adhere to the skin and in emollient creams for the purpose of keeping the skin soft; also as glycerin of starch to make a non-greasy base for ointments. (*b*) Pure glycerin is strongly hygroscopic and is therefore irritating to an excoriated area of skin, though this property is useful in promoting exosmosis in the case of lesions such as boils and when used in tampons. When used in a lotion or emollient cream it is always diluted with water to a concentration of only 12% to 30%. In these dilutions it is not irritating. (*c*) It would not appear to have any particular function in a barrier cream except as forming part of the base.

Note on Schizophrenia

Q.—*I have been puzzled over the terms schizophrenia and dementia praecox. The former term literally means "split mind." How may we diagnose clearly these two types of mental disturbance? Clouston seems to have put both these types under the head of "Insanity of Adolescence."*

A.—The two terms are synonymous for the same disorder, but dementia praecox is the older term. The term schizophrenia was introduced because it was recognized that a considerable proportion of the cases did not proceed to dementia, but on the contrary made a more or less complete recovery. It is now customary to speak of schizophrenic dementia instead of dementia praecox in those cases in which the end-result is chronic mental deterioration of a severe degree. The diagnosis in the condition as a whole is made on a symptom-picture in which at least the beginning is characterized by disorder both of thinking and of behaviour. Thinking shows disturbance both of its form and of its content—that is to say, it is disconnected often to the extent of incoherence, and it consists of a considerable variety of morbid ideas amounting to delusions, never well knit together and often characterized by oddity. Hallucinations are common but not invariably present, and are likewise apt to have a fantastic air about them. As time goes on the delusions and hallucinations in a deteriorating case become even more fragmentary and poorly knit together, until finally only a few relics of the old notions are left. Behaviour is altered from the beginning, either in the direction of increasing withdrawal and exclusiveness and dreamy preoccupation or for a time in the direction of peculiar and occasionally very excited and impulsive behaviour. Again, in the course of time behaviour becomes less active as a rule, and in the typical deteriorating case the patient settles down to a largely vegetative existence. The inquirer should refer to Henderson and Gillespie's *Textbook of Psychiatry* (5th edition, 1940) for further information.

Lock Hospitals

Q.—*Can you tell me the origin of the name "lock" as applied to "lock" hospitals for venereal diseases?*

A.—Four possible explanations have been given for the origin of the word "lock" in this connexion. (1) The use of a lock of hair in ancient times to arrest haemorrhage. (2) The situation of the female lock hospital near the lock bridge. (3) That the name of the founder was Lock. (4) That the patients were kept under lock and key. These explanations seem rather weak, and have little to support them.

The following information very kindly supplied to me by Mr. Johnston Abraham seems much more reliable. "The origin of the name 'lock' is obscure. There is no doubt it was applied to the old lazar houses for leprosy in the Middle Ages, and when syphilis became a menace and leprosy died out it was transferred to the venereal hospitals. Anson, who was a pupil of Ricord, states in his book on prostitution that the name is Norman French, and is a corruption of 'Les Loches,' the lazar houses. There is an engraving of the old Lock Hospital in the Borough founded by Edward VI, which shows over the doorway the words 'Les Lock.' This old hospital, which was staffed from Bart's, was demolished in 1741. The name was revived by William Blomfield, surgeon to St. George's Hospital, when he founded the present Lock Hospital in 1746. That, I think, sums up all that is known about the name. One thing is certain: it has nothing to do with locking people up."

Undescended Testis

Q.—*Until what age in childhood should the condition of undescended testis be left untreated in expectation of spontaneous cure? What treatment, short of surgical correction, should then be provided?*

A.—Until the approach of puberty. A large number of hidden testicles descend spontaneously then. Treatment with chorionic gonadotrophin will frequently bring them down earlier, but it is unnecessary in so large a proportion of cases that it is not justifiable, although the risk of producing a precocious puberty has been exaggerated. At the age of about 12 or 13, 500 rat units of chorionic (urinary) gonadotrophin should be given intramuscularly twice a week until descent occurs or three months' treatment has been given. If then the testicles have not descended they are truly ectopic, and operation should be performed without further delay.

Blocked Tubes

Q.—*A woman aged 33, married seven years, no children, had tuberculous peritonitis at the age of 15. Eighteen months after marriage she had what seemed to be an abortion. Recently a test was made to gauge the patency of her tubes by injecting lipiodol into the uterus. Both tubes were blocked at a distance of about 1½ in. from the isthmus of the uterus. She has recently also been examined for T.B., even though she showed no symptoms of this disease, and the opinion has been expressed by the physician that the tuberculosis is quiescent and that there is no danger of lighting up the old disease. Is there any hope, by means of air insufflations over a period of time, of opening up the tubes, or is there any alternative treatment?*

A.—The history suggests that the tubes have been obstructed by tuberculous salpingitis associated with peritonitis. If, however, it is certain that this woman did have an abortion, then the tubal obstruction may be the result of post-abortal infection, with or without pre-existing tuberculosis. In either case air insufflation at a pressure insufficient to rupture the tube offers no hope of overcoming a complete mechanical obstruction, and any attempt at it would be dangerous in that it would be likely to cause an acute exacerbation of the infection. The only possible line of treatment is salpingostomy by abdominal operation, and, with the obstruction half-way along the tube, the chances of this being successful are remote. If the infection is tuberculous in nature the outlook is hopeless, and in view of this possibility it would probably be wiser not to undertake any further treatment, thus avoiding the risk of activating a quiescent condition.

Reaction to Potassium Chloride

Q.—*With reference to the question on chloride of potash in allergy (Oct. 2, p. 440), what are the "extremely uncomfortable" side-reactions mentioned in the reply?*

A.—Although it was formerly believed that potassium salts were excreted too rapidly to produce any side-effects, more and more evidence has recently accumulated that such may occur, particularly with high dosage and in patients with cardio-renal disease. Symptoms described include gastro-intestinal irritation, paraesthesia of the hands and feet, cyanosis, prostration, irregularity of the pulse, heart-block, and even sudden death.

Septic Tonsils and Teeth

Q.—*One often hears such expressions as "septic teeth," "septic tonsils." These diseases are not referred to in textbooks, at least in the majority of them. What exactly do the terms imply?*

A.—The popular use of the term "septic teeth" refers usually to pyorrhoea which begins as an inflammation of the edge of the gums—marginal gingivitis. If unchecked the infection spreads, destroys the attachment of the mucoperiosteum to the neck of the tooth, and pockets of pus develop between gum and tooth. This condition is called pyorrhoea alveolaris. Another infection included in "septic teeth" is the apical abscess which follows dental caries. Here the infection spreads up through the pulp cavity to the apex of the tooth-root and attacks the periodontal membrane. An acute alveolar abscess may result; more often the sequel is a chronic apical infection which can only be certainly detected by *x*-ray examination.

The term "septic tonsils" is often used loosely to denote any obvious abnormality, particularly enlargement, of the tonsils. It should be restricted to those cases in which there is chronic infection of the tonsils—chronic tonsillitis. Affected persons have a history of recurrent sore throat, the tonsils are not as a rule obviously enlarged, the tonsillar glands are palpable, and foul-smelling exudate (not to be confused with the harmless cheesy material) can usually be squeezed from the tonsillar crypts. Such tonsils should be excised. Tonsillar enlargement is almost a physiological happening in children, and, far from being a liability, is probably an asset by acting as a front-line filter of pathogenic bacteria—and perhaps by manufacturing antibodies, for there is evidence that the lymph nodes take an active part in antibody production. Fortunately there is now a reaction against wholesale tonsillectomy among children.

The Injured Diabetic

Q.—*I note that in "Any Questions?" (Oct. 9, p. 472) your expert advises: "If the diabetic is uninjured, deal with him like any other injured person, as he is very unlikely to be suffering from hypoglycaemia." Is it not a fact, then, that hypoglycaemic coma is likely to be brought on by severe mental and physical stress and pain, and is definitely more sudden in onset than diabetic coma? I should appreciate confirmation on this point.*

A.—It is very unlikely that hypoglycaemic coma can ever be brought on by severe mental or physical stress and pain, because in these conditions it is believed that there is an outpouring of adrenaline to combat the condition. The adrenaline will inevitably send up the blood sugar and will therefore tend to prevent the onset of hypoglycaemia. All these three conditions are therefore much more likely to cause glycosuria. It is, of course, possible that a patient who has run to a shelter without having the carbohydrate of her meal, or who has taken a wrong dose of insulin, or who is liable to sudden attacks of hypoglycaemia, might develop an attack of hypoglycaemia during an air raid in spite of the outpouring of adrenaline produced by physical stress and pain. A "faint," on the other hand, may well be brought on, and the patient should, of course, recover quickly. It is most important to treat any diabetic person who becomes unconscious during an air raid as having hypoglycaemia and to give sugar to drink or, if necessary, intravenously. Hypoglycaemia always comes on very suddenly, and the point of distinction between it and diabetic coma is the well-being of the patient until just before the onset of unconsciousness. In diabetic coma, on the other hand, there is nearly always a history of an illness of twenty-four hours' or more duration, often, unfortunately, coupled with the omission of the insulin because the patient cannot eat any food. The onset of coma is always gradual.

Precancerous Stage

Q.—*What is known of the precancerous stage of cancer?*

A.—Cancer develops with high frequency in certain gross lesions which, commonly, are described as precancerous. In general the transition occurs abruptly in a lesion of long standing and it is not inevitable. Distinctive lesions, in the strict sense precancerous, which necessarily precede and always culminate in cancer, are hard to identify. In the experience of most investigators the first unequivocal evidence of the action of carcinogenic agents in experimental animals has been the development of minute tumours after a latent period of weeks or months during which the response of the tissues is not demonstrable by methods hitherto used.

Polyuria in Old Age

Q.—*Is there a tendency to polyuria with increasing age? A man aged 68 has to urinate twice during the night. The urine is clear and perfectly normal, the stream good, and there is no difficulty in starting. There are no signs or symptoms of enlarged prostate except perhaps slight delay in finishing micturition. Blood pressure is 130/75. Little fluid is taken in the evening. The quantity of urine is rather large.*

A.—A tendency to nocturnal polyuria with increasing age may be an early expression of diminution in either the cardiac or the renal reserve, resulting from arteriosclerosis. When the origin is cardiac there is usually oliguria during the day; the recumbent posture at night diminishes the venous engorgement of the lower extremities, with consequent elimination by the kidneys of occult oedema fluid which has accumulated during the day. The specific gravity of the nocturnal urine is high, and there should be confirmatory evidence of diminished cardiac reserve, such as diminished exercise tolerance. When the origin is renal, the polyuria compensates for diminished "flexibility" of the kidneys and is the result of arteriosclerotic ischaemic fibrosis replacing functioning renal tissue. A specific gravity concentration test shows inability to secrete a highly concentrated urine. There is some polyuria during the day and the nocturnal urine has a low specific gravity. In this patient—if it is assumed that the symptoms are not due to prostatic obstruction and there are no other symptoms which suggest an unduly diminished cardiac reserve—it is reasonable to regard the cause as being arteriosclerotic diminution of renal reserve, and to regard the patient as having kidneys corresponding to Clifford Allbutt's description of a "starved but not a corrupt kidney, sufficient for the smaller life of an elderly man."

LETTERS, NOTES, ETC.

Pruritus Ani

Dr. F. Sugden (Kingsclere) writes: With reference to the note on pruritus ani in the "Any Questions?" column of the *Journal* (Sept. 25, p. 410), might I recommend a treatment inaugurated by my partner, Dr. D. N. Philip, when he was H.S. at the Princess Beatrice Hospital? This consists of repeated painting of the affected area with Castellani's fuchsin paint. I have seen this clear up completely several very severe cases of pruritus ani, and I have yet to see a relapse.

Mr. J. Livingston (Barrow-in-Furness) writes: Local application of calomel powder (plus scrupulous cleanliness) is one of the oldest and best remedies, and this treatment has been published in the *Journal* from time to time for years.

Dr. A. Greene (Norwich) writes: I have had experience of this distressing complaint being cured by the application twice a day for a few weeks of ung. metallorum.

Nipples and Breast-feeding

Dr. Mary G. H. Edwards (New Milton, Hants) writes: I feel I must supplement your answer to the query on cracked nipples. I have learnt that these are due to allowing the infant to remain too long on the breast during feed-times for the first 2 or 3 days. Two minutes on the first day, three the second, five on the third, are as much as a nipple can be expected to stand. Nipples can be hardened by leaving soap on them, from the seventh month, rather than washing off the soap; but even untreated nipples will not crack if not over-used at first. Depressed nipples can, in even extreme cases, be made to function by the diurnal use of a breast-pump, from the third month of pregnancy if possible, and this treatment is far more efficacious than massage.

Treatment of Gonococcal Arthritis

Mr. J. F. Peart, F.R.C.S. (Sandbach, Cheshire), writes: In your issue of Aug. 28 a question was asked in connexion with the treatment of gonococcal arthritis. I noticed that prostatic massage was being carried out and recommended. As I pointed out in a paper read to the International Congress of Hygiene in 1928, the only satisfactory treatment of gonococcal rheumatism is vasotomy. That it is also the rational treatment for the condition is evident when it is realized that the infection is lodged in the seminal vesicles. I consider massage of the prostate useless, if not actually harmful, as likely to cause a dissemination of the poison, besides being painful for the patient when the prostate is tender. Massage of the vesicles would be more rational, but unfortunately it is impossible in most cases to reach the fundus of the vesicles, so that expression would be imperfect. In my experience these cases clear up after vasotomy has been performed, cessation of pain and gradual subsidence of the swelling in the joints resulting. That vasotomy may cause sterility is a myth, for I have had cases showing spermatozoa in their semen six months after the performance of double vasotomy.

Temporary Tonic Motor Paralysis

A paper by G. de M. Rudolf on a condition believed not hitherto described has been deposited in the library of the Royal Society of Medicine. This paper may be consulted by any who are interested; but as the condition is probably of a psychological nature, it is considered unwise in the national interests to publish a description of it until after the close of hostilities.

Salmon in the Thames

Dr. Herbert C. Jonas (Braunton) writes: The leading article on the rivers of England (Oct. 9, p. 457) once more refers to the old story of the glut of salmon and the indenture of the apprentices. The author has clearly not read all the evidence. Frank Buckland wrote the final word. When he was inspector of fisheries he offered £50 for a copy of this much-quoted document. Once when in Exeter he heard of an old lady who actually had a copy. She lived in the middle of Dartmoor. Buckland hired a carriage and pair and drove off next day. He saw the old lady and asked to see the copy. Her answer was: "Wull, there now, durrn me ef I didn' burrn the thing last wick when I were spring clanin'."

Disclaimer

Dr. E. Wrigley Braithwaite (Leeds) writes with reference to some press publicity following his letter in the *Journal* of Oct. 2 (p. 433): What was made to appear as an interview with me in the columns of one paper was derived from a phone conversation only, in which I refused to make any statement and forbade any comment under my name on my letter. I subsequently refused this paper any assistance or information on five occasions.